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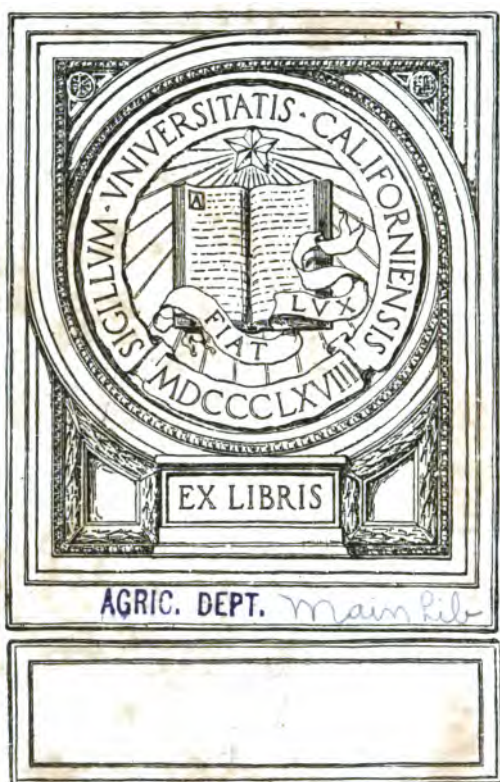
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^ **BOARD OF AGRICULTURE AND FISHERIES.**

BRITISH BREEDS

OF

LIVE STOCK.

(Second Edition.)



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This Handbook was originally prepared for the Brussels and Buenos Aires International Exhibitions of 1910 with the special object of encouraging the export of British live stock. It has now been extensively revised, and it is hoped that it will prove of service to all who are interested in live stock, whether for exportation or otherwise.

The first edition of the Handbook was compiled by Professor Wallace, of Edinburgh University, author of *Farm Live Stock of Great Britain*, whose assistance in the matter the Board desire to acknowledge. In preparing the second edition, attention has been given to various points of practical importance with a view to making the Handbook still more useful, and, in particular, attention may be drawn to the tables showing the average ages, live weights and daily increases of cattle, sheep and pigs at the Smithfield Shows for the past ten years. In the case of dairy cattle, milk yields have been given so far as they could be ascertained. This information has not been previously published in this form, and it is thought that it will prove a useful guide to the relative size, weight and productive capabilities of the different breeds.

The Board are greatly indebted to the Secretaries and Councils of the various Breed Societies and of the Smithfield Club who, almost without exception, supplied valuable information and in many cases undertook the revision of the descriptions of their respective breeds.

Acknowledgment must also be made of the services rendered by many private breeders and judges, notably Lord Arthur Cecil, Col. R. F. Meysey-Thompson, Messrs. C. Coltman-Rogers, T. F. Dale, F. W. Garnett, Tresham Gilbey, T. A. Howson, J. H. Munro Mackenzie, R. W. R. Mackenzie, C. W. Tindall, and others, who contributed articles, notes and suggestions.

The photographs have been supplied by Mr. G. H. Parsons, Alsager, Cheshire; Mr. F. Babbage, London, N.W.; Mr. Chas. Reid, Wishaw; The Sport and General Press Agency, Ltd., London, W.C.; Messrs. A. Brown & Co., Lanark; Messrs. Montague Dixon & Co., London, E.C.; Mr. T. T. Brydon, Lauder; and Mr. W. R. Gay, South Brent.

A statement of the more important shows and places at which animals of each breed can be bought will be found on page 116, together with an indication as to the average range of prices. For further particulars and for the names of individual breeders, application should be made to the Secretaries of the Breed Societies, whose names and addresses are given in the same place.

Board of Agriculture and Fisheries,
Whitehall Place,
London, S.W.

January, 1913.

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SHIRE STALLION, "NORBURY MENESTREL."
Winner of Numerous Prizes.



SHIRE MARE, "DOROTHY OF WARESLEY."
First Prize, Shire Horse Show, 1908 and 1910.

BOARD OF AGRICULTURE AND FISHERIES.

HANDBOOK OF BRITISH BREEDS OF LIVE STOCK.

HEAVY DRAUGHT HORSES.

There are three British breeds of Draught Horses—viz., the Shire, the Clydesdale and the Suffolk. The Clydesdale is practically the only breed known in Scotland, and is kept in fair numbers in the Northern Counties of England. The Suffolk is more or less restricted to the Eastern Counties of England, the Shire occupying the remainder of the country.

THE SHIRE.*

History of the Breed.—The Shire is the largest and heaviest of all the British breeds of horses, and in these respects is surpassed by no breed in the world. So far back as the Roman invasion the original horses of England were noted for their strength and activity, but it seems highly probable that at that time they were what would now be regarded as little better than mere ponies in size. In the successive invasions to which the country was subjected, horses were introduced from the Continent, and without doubt played an important part in the development of the native breed. The chief influence, however, responsible for the size and weight of the Shire was most probably the necessity of developing these characters to fit the "War Horse" for carrying the enormous weights associated with plate armour, and up to the seventeenth century constant endeavours were made by Kings and Parliaments to improve the breed. To a great extent these attempts at improvement took the form of crossing with foreign stock, and large importations of horses, particularly from the Low Countries, were made for breeding purposes.

Until about the Stuart period the "Great Horses" were used principally for military purposes, but after the introduction of firearms the heaviest class was relegated to agricultural and draught purposes.

In later times the breed became more specifically known as the "Old English Black Horse," and reached its greatest development in Lincolnshire, Derbyshire and adjoining counties. Sir Walter Gilbey in *The Old English War Horse* points out that the name "Shire" is associated with the fact that the breed "has for

* See article on *The Shire*, by C. W. Tindall in *Horses of the British Empire*, edited by Sir Humphrey de Trafford. Walter Southwood & Co., Ltd.

centuries beyond a doubt been distributed in numbers through the district between the Humber and the Cam, occupying the rich fen lands of Lincolnshire and Cambridgeshire, and extending westward through the counties of Huntingdon, Northampton, Leicester, Nottingham, Derby, Warwick and Stafford, on to the Severn."

The Shire Horse Society was established in 1878 under the name of the English Cart Horse Society, which title it retained till 1884. Long before this, however, the value of the Shire had been appreciated and the breeding conducted on systematic lines, so that the first volume of the Stud Book issued in 1880 contained no less than 2,381 verified pedigrees, some of which have been traced back nearly a hundred years. Up to the present, thirty-three volumes have been issued, the last containing the entries of 1,227 stallions and 4,491 mares. In addition to issuing the Stud Book, the Society holds an Annual Spring Show and Sale in London and also awards medals and prizes for Shires at the leading agricultural shows—291 in this country alone, in 1911. A most important condition, which applies to both its own and other shows, is that all horses have to pass a strict veterinary examination for soundness before they can receive any of the Society's medals or prizes. The effect of this in eliminating unsoundness is shown by the fact that—while at the earlier shows considerable proportions were disqualified for various forms of unsoundness—at the London Show of 1912 less than 6 per cent. were rejected by the veterinary inspectors.

Under the care of the Society the breed has developed to a remarkable extent, particularly perhaps in respect of uniformity of type, soundness, and action, while the size and weight have in no way been reduced. As illustrating how values have appreciated, it may be mentioned that at the first public sale held in connection with the Shire Horse Show in 1895, 121 horses were sold at an average of £60 2s. 0d., in 1911 149 animals were disposed of at an average of £127 7s. 0d., and in 1912 142 at an average of £120 6s. 0d.

Distinctive Characteristics of the Shire.—The Shire Horse Society has not issued an official standard of points, but in some of its publications the outstanding characteristics are indicated and the following is a brief outline.

A Shire stallion should stand at least 17 hands high, and weigh not less than 20 cwt.; his legs should be as big and massive as possible so long as the "bone" is clean and flat. He should measure at least 11 inches below the knee and 12 inches or more below the hock.

The hair should be plentiful, with "feather" not merely at the back of the legs, but also—though to a less extent—at the sides; it should be strong but not wiry, and free from any tendency to woolliness or curl. The action should be straight, level, true and free; the hocks should be kept well together and in position.

The feet should be wide and open at the heel, the pasterns should have sufficient slope, but not be long and weak.

The head of the horse should be thoroughly masculine in character.

Mares are usually not so high as the horse, and the general conformation should be long, low and wide.



SHIRE STALLION, "HALSTEAD ROYAL DUKE."

Champion, Shire Horse Show, 1909. Champion, Royal Agricultural Society's Show, 1908.



CLYDESDALE STALLION, "BARON'S PRIDE."

"The greatest Clydesdale Sire that ever lived."

Colour.—Shires are found of practically all colours. In the early days of the breed black or grey were regarded as indicating pure blood, but now blacks, bays or browns—and especially dark browns—are most sought after. Chestnuts, roans and greys are not so fashionable, although roan is considered a hardy colour and is in favour with London draymen.

Shire horses have been extensively exported during the past few years, good customers being the United States, Argentine, Canada, Germany, Australia, Russia, not to mention others. In 1910 677 Shires were exported, nearly one-half going to the United States, where the breed is well appreciated. At a recent sale of Shire mares and fillies in Illinois, 54 animals averaged over £191 each.

Noted Sires.—The modern Shire can hardly be said to be so indebted to any one or two animals, as is the case in some breeds, but the influence of a few sires is worthy of mention.

Lincolnshire Lad II. (1365) was foaled in 1872, his sire being Lincolnshire Lad I. or Honest Tom (1196). Lincolnshire Lad II. was not remarkable for his own excellence—he was described as narrow, light in the middle and somewhat deficient in muscle, though at the same time he was “well topped,” full of courage and fire, and had an enormous quantity of hair. The most famous of the sons of Lincolnshire Lad II. was Harold (3703), a horse which did much for Shires. Foaled in 1881, he was champion at London in 1887, and in the 10 years 1893 to 1902, he easily headed the list of sires of prizewinners at the Shire Horse Show. Another noted strain is that tracing back to William The Conqueror (2343), whose most famous sons were Hitchin Conqueror (4458) and Prince William (3956).

In recent years Lockinge Forest King (18867), a great grandson of Harold and foaled in 1899, has been pre-eminent. He was never champion at London, but had quite a creditable showyard career. Since 1907 he has headed the list of winning sires, and though he died in 1909, 13 of his offspring were prizewinners at the 1912 Shire Horse Show.

THE CLYDESDALE.

Origin of the Breed.—The Clydesdale, like the Shire, is of mixed origin, and there is a good deal of difference of opinion as to the relative influence of the different elements entering into its composition.

From early times the Upper Ward of Lanarkshire in the valley of the Clyde has been noted for powerful farm-horses, owing partially at least to the ability of the soil to support large framed animals. At different periods, special importations of Flemish and English horses were made, in addition to the interchange which would naturally go on in times when horses were the sole means of transport by land. For the past 30 years, however, no Shire or foreign blood has been introduced, and it is hardly necessary to say that the two leading breeds of British Cart Horses are distinct, though having many ancestors and characteristics in common.

Among the most celebrated of the earlier horses imported into Scotland and used to improve the native breed were Flemish

stallions brought by John Paterson, of Lochlyoch, about 1720, an English horse "Blaze," introduced by another Paterson about 1780, while successive Dukes of Hamilton imported Flemish horses at different periods.

The best and most noted modern Clydesdales trace to "Glancer" (335) *alias* Thompsons "Black Horse," bred about 1810 by Somerville, Lampits Farm, Carnwath, although belonging to the Lochlyoch Flemish connection. He was a very perfect horse in all points except the hocks, which were considered to be "a little full." Both hind legs were white, and "his clean sharp bones were fringed with nice flowing silky hair." From "Broomfield Champion" (95), the great grandson of Thompson's "Glancer," the most famous sires of the breed, including "Prince of Wales" (673) and "Darnley" (222) were descended.

The blending of the blood of Darnley mares with that of "Prince of Wales" and his male progeny, was in large measure responsible for the modern Clydesdale. The "Prince of Albion," which cost Sir John Gilmour, Bart., of Montrave, £3,000, was a son of the "Prince of Wales" by a daughter of "Darnley"; and the highest price (£1,000) ever paid for a two-year-old Clydesdale filly was given, at Montrave sale, in 1892, for an animal of the same fashionable blood, "Montrave Rosea," registered as "Queen of the Roses" (12302), the offspring of two champions, "Prince of Albion" (6178) and "Moss Rose" (6203).

"Baron's Pride" (9122), the most famous sire of modern times, is descended from the Prince of Wales—Darnley connection. He was not fully appreciated while he remained with his breeders, Messrs. R. and J. Findlay of Spring Hill, Baillieston, Lanarkshire, but his offspring have gained more premiums at shows than all other competitors put together. Perhaps the most famous of his sons are "Everlasting," "Silver Cup" and "Baron o' Buchlyvie." All these have been first prize winners at the Highland Society's Show, the two former three times each; the last mentioned recently realized the record price of £9,500 by public auction.

Grey was a common Clydesdale colour till 1827, when the Highland Society began to offer premiums for horses at their Shows, but ruled that only "black bays or brown bays" were eligible for competition. Grey colts were castrated and the number of grey horses in the country greatly reduced. The embargo on grey did not last long, and since the middle of the nineteenth century "grey stallions have taken some of the best prizes of the Society," but now grey and chestnut are both out of favour, and a grey stallion is rarely kept.

Distinctive Characteristics of the Clydesdale.—Bay and brown are the commonest colours; black comes next, and more rarely, chestnut roan and grey, with very frequently a silver hair through the darkest coat, a white blaze and one or more white feet and shanks. The average height of mares is about 16 hands, of stallions 16·2, few exceeding 17 hands.

The breed is famous among draught horses for activity, cleanness and soundness of bone, freedom and general perfection of knee and hock action at the walk and in the trot; length and slope of pastern; size and openness of feet; gaiety of carriage: fineness of skin;



CLYDESDALE STALLION, "BONNIE BUCHLYVIE."
Champion, Royal Agricultural Society's Show, 1908. First Prize, Highland and Agricultural Society's Show, 1911.



CLYDESDALE MARE, "BOQUHAN LADY PEGGY."
Unbeaten in her Classes in 1910, 1911 and 1912. Winner of several Championships at the Royal Agricultural Society's and the Highland and Agricultural Society's Shows.

silkeness, straightness and length of "feather," which is confined to the back of the leg and does not spread to the side ; general beauty and symmetry, though there is a tendency in some members of the breed to shortness in the back-ribs and consequent lightness in the barrel ; good sloping shoulders and short muscular loins and back, which last sometimes appears hollow because of the height of the powerful well-fleshed withers. In action the hocks should move closely together, and the hind toes turn slightly outwards, but not sufficiently to throw out the stifle joint. Wideness at the hocks, more common with stallions than mares, implies weakness of the loins and tends to grow worse with age or after a period of service ; the joints of the limbs should be large and clear, and the large round feet substantial, smooth, shortened at the toes and well arched below, without any trace of thinness or flatness.

Clydesdales Abroad.—Clydesdales have been in demand for many parts of the world for over 50 years and a great many were exported to Australia and New Zealand from the middle to the end of the last century. In the years subsequent to 1880 a great number were exported to the United States and Canada ; the trade then fell away, but since the beginning of the present century the demand from Canada has been steadily increasing, and last year (1911) out of a total of 1,617 pure Clydesdales exported, 1,349 went to Canada, the remainder being distributed among the United States, Russia, New Zealand, Argentine, Australia, South Africa, Sweden and Hungary.

THE SUFFOLK.

The Suffolk "Punch" was named from its native county and from the thick-set body on short legs of the early form of the present breed, though it now attains a height approaching that of the Shire or Clydesdale. Its most conspicuous points of difference from the Shire and Clydesdale are its chestnut colour and its freedom from the abundance of long hair on the legs. The absence of this hair makes the Suffolk look rather heavy for its legs in the eyes of those accustomed to the other breeds, but actual measurement shows that it is not unduly short of bone, which, moreover, is of good, hard quality and stands the test of hard work. The breed is also famous for fruitfulness and longevity, and for a docile but courageous disposition and even-tempered willingness to work.

The natural gameness shown by the indomitable continuous effort which the Suffolk horse is willing to make at a dead pull even beyond his strength, has been inherited. His ancestors were pitted against each other in "draw-matches," and the soft disposition which refused to try honestly would naturally be eliminated by the usual process of selection. This inherited quality is also seen in the young horses taking kindly to work and requiring little breaking.

Characteristics of the Breed.—A publication issued in 1880 by the Suffolk Horse Society (founded 1877) says :—"The Suffolk horse is an excellent mover with a smart quick step, a true balance all round at the trot, and a capital walker." The hoofs are well shaped, and hereditary diseases of the feet, once not uncommon in the breed, have been eliminated as far as possible, by carefully

breeding from sound animals. The head shows breeding and quality and harmonises with the clean-limbed condition, as well as with the thin skin and soft hair tightly fitted, especially over the bones and joints of the legs.

The Suffolk is an ideal plough horse, preferred and appreciated in East Anglia, but it is also in high favour in large towns as a vanner for the delivery of the lighter classes of goods, though some of the best modern Suffolks compare not unfavourably with Shires as regards weight; frequently geldings in good condition weigh over a ton each. The height averages about $16\frac{1}{2}$ hands but varies from below 16 up to 17. The girth behind the shoulders is about 8 feet, sometimes a little more.

Colour.—The varieties of colour have been classified into seven shades of chestnut—The dark (at times approaching a brown-black, mahogany, or liver colour), the dull dark, the light mealy, the red, the golden, the lemon, and the bright chestnut. The last is the most popular, being a lively shade, with a slight gradation of light colour at the flanks and the extremities, and not infrequently shot with white or silver hairs hereditarily distinctive of some strains, and mostly associated with a star on the forehead, or a thin 'reach,' 'blaze,' or 'shine' down the face. The flaxen mane and tail are usually seen on the bright chestnuts. The red, generally a whole colour without variation of shade, is very popular. The golden shade is often associated with a white hind heel. The light mealy chestnut is not in favour, being usually regarded as an indication of a weak constitution. The dark chestnut is liked by many breeders, being considered a hardy colour; it is mostly a changing colour, varying with the season from almost black to a dark cherry-red. Bay, which is now never seen, occurred in strains which had a stain in the pedigree, and like black, white, grey or dun is never mentioned among Suffolk horse colours.

History of the Breed.—How long the Suffolks have been associated with the county is unknown, but they are mentioned as far back as 1506 in Camden's "Brittania." In 1764 Andrew Blake introduced Farmer (174) and advertised him as a Lincolnshire trotting stallion. This horse was a great success as a breeder, his progeny realised high prices and, by the third or fourth cross, were in turn advertised as pure Suffolks. A half-bred Suffolk brought from Lincolnshire, viz., Wright's Attleborough Farmer's Glory (1396), "a beautiful chestnut cart horse," travelled in Suffolk in the first decade of the nineteenth century. The earliest individual pedigree records trace to Crisp's horse (404) of Ufford, advertised as " $15\frac{1}{2}$ hands high; light chestnut, and active; fit to breed good stock for coach and road"; and "every animal of the breed now in existence traces its descent in the direct line in one unbroken chain to Crisp's horse." A detailed description of a descendant of this horse, taken more than a century ago from the lips of an old man who knew him, varied little from the Suffolk horse of to-day. The blood of the Blake stock still remains on the female side, but "all extraneous introductions have long ago died out in the male line, and those remarkable features—the short legs, the round carcase, the longevity with vitality—are still the well-known characteristics of the Suffolk horse."



SUFFOLK STALLION, "SUDBOURNE PETER."
Champion, Royal Agricultural Society's Shows, 1911 and 1912.



SUFFOLK MARE, "BAWDSEY WAX DOLL."
Champion Mare. Royal Agricultural Society's Show, 1911.

The Suffolk is also notable for the power of doing well on little food, working long hours without a meal; and of continuing to work to a greater age than other draught breeds. The latter quality it probably acquired or strengthened by a Thoroughbred connection which it had in Barber's Procter (58), who was "the son of Winter's Storm, a trotting horse of great substance, son of Gooch's Blood-horse, brother to Thunderbolt." Suffolks in the Eastern Counties lie out in yards all through the winter, the only shelter provided being an open shed, and they are only brought into the stables to be baited and harnessed. They keep in excellent condition through the most severe weather, and look almost as well in the coat as other breeds stabled.

LIGHT HORSES.

THE THOROUGHbred.

The Thoroughbred or English Race Horse is a breed of mixed origin, and the elements entering into its composition were largely if not entirely foreign. From very early times, horses of Arab, Barb, Turk and Spanish breeding were imported and used to cross with the native mares; doubtless, even before the Stuart period there were many superior running horses in this country, and in all probability many of the mares of unknown breeding which appear in the pedigrees of the early Thoroughbreds were of this modified native stock. The real foundation of the breed may, however, be said to have been laid by Charles II., who commissioned his Master of Horse to go abroad to purchase the best Eastern mares he could find. Some were secured, but neither the exact number nor any description has been recorded, though the majority were Barbs, and it is possible that an Arab or a Turk was included too. They were described simply as Royal Mares, as were also some of their female offspring, and at the death of Charles II., were sold and dispersed to various parts of the country. The importation of stallions continued and no doubt paved the way for the three outstanding sires—the Byerley Turk imported in 1689, the Darley Arabian 1706, and the Godolphin horse 1724; the latter is usually described as the Godolphin Arabian, but most authorities agree in saying that he was really a Barb. These horses respectively founded the three great lines of the Thoroughbred usually associated with the names of their descendants, Herod foaled 1758, Eclipse 1764, and Matchem 1748, with which horses the Thoroughbred as we now know the breed may be said to have begun. There is difference of opinion as to the relative importance of the influence of the different races to which the breed is indebted, but Barb, Arab and Turk have certainly first claim, and in any case there is no doubt that the blending and subsequent rigorous selection on the racecourse have produced a horse far superior in speed to any of the Eastern breeds or to the old native horses.

Long-distance racing with mature horses over courses of three or four miles was once the fashion; but this in recent years has given place to races over short distances, and the majority of horses in training are under four years. It has been asserted on high

authority that the Thoroughbred has developed an inch in height in every 25 years since 1700, and with increased height a longer stride and greater speed have resulted.

Consanguineous breeding, other than the mild form of line-breeding, has not been practised among racehorses, as it is thought to reduce stamina and courage.

Points of the Thoroughbred.—The head should be of pleasing appearance and moderate size, fine, lean, with distinct features, broad between the eyes, and with the line from between the ears to the point of the nose almost straight. A slight divergence by way of elevation in the male and depression in the female is a natural sexual characteristic in a great many cases. The ears should be medium in size, somewhat pointed, not far apart, active and well carried; the eyes large, prominent, clear and intelligent, brightness indicating vigour of constitution and staying power. The nostrils should be wide, thin and dilatable, pink within, and moist in appearance. The throttle or throat-latch should be light and clean, and the jaw-bones sufficiently wide to accommodate a large windpipe and allow the head to play freely.

The neck should be long, the upper outline, from withers to poll, sharp, and twice as long as the lower part from shoulder to larynx, strongly muscular and arched, swelling gradually towards the shoulder, and joining the body flatly and smoothly "without any place for the collar." The large windpipe should stand off from the rest of the neck.

The chest capacity should be large, to ensure staying power, but this is secured better by depth than by great breadth, as it permits freer play of the shoulder and keeps the fore legs more in line with the hind legs. The shoulder should be long, and slope obliquely back to give elasticity and freedom in movement, and to support high, fairly close, long withers.

The body should be short above and long underneath, somewhat round in type—a formation due to ribs which are sprung well from the spine and are close to each other, with a depth at the withers of nearly half the height, and a length equal to the height at withers and croup. The back and loins should be comparatively broad, level, and muscular. A long or slack loin, lacking in muscle, is associated with too much distance between the last rib and the hip-bone, weakness in the coupling, and deficient action. The croup tends to be long, and may be either fairly level with a high-set tail, as with an Arab, or curving gracefully, with a comparatively low-set tail.

The hind quarters should be long, and the thighs strongly muscled and capable of great driving power; the gaskins or second thighs broad and prominent, and, viewed from behind, the muscle of the inner thighs should fill the space at this part between the hind limbs. The hind leg ought to be deep and wide at the hocks, clean and free from fleshiness and gumminess, and the point prominent; the cannon bone short, flat and clean. In looking from the side at a correctly formed leg "a plumb line, from the centre of the hip joint should equally divide the gaskin and the foot; from the point of the buttock it should run parallel with the line of the cannon, and from behind it should equally divide the hock, cannon, pastern, and



THOROUGHBRED STALLION, "PERSIMMON." *Winner of the Derby, 1896.*



THOROUGHBRED STALLION (HUNTER SIRE), "KING'S COURTSHIP."
Winner of Super-Premium and the King's Challenge Cup 1919



foot. The pastern joints should be smooth, set true, and in conformity with other parts of the limb"; the pasterns long, strong, and clean, slanting at an angle of 45° from the ground. This provides sufficient elasticity to prevent the different unsoundnesses produced by concussion, and gives a comfortable seat for a man in the saddle. Long pasterns are weak and liable to snap, and result in a "break down" when going at high speed. A long pastern is not so necessary behind, as there is less concussion on the hind limbs.

The arm should be muscular and strong, and the humerus short and not too far out of the line of the leg below, to give style and an upright appearance; and free at the elbow to permit the insertion of the hand. If the elbow is too close or tied in, the toes point out; or if too loose and open, the toes turn in, and the action becomes awkward, if not dangerous. The space between the forelegs should not be too wide, the forearm long, wide and well muscled. A strong knee, broad in front, borne by a short, clean, wide cannon bone, with the sinew attached well back, and the pisiform bone, forming the projection behind the knee, sharp and prominent, are most important.

The foot should be of medium size and firm texture, wide, moderately upright, high at the heel, concave below, thoroughly sound, and have a healthy appearance, indicated by an oily coat of natural wax; the springy frog showing the traces of regular usage as a buffer, the result of touching the ground at each step. Contraction, brittleness, and flatness, are the serious and common defects in horses' feet.

The whole appearance should be suggestive of speed, and to obtain this, free, smooth and true movement is essential. The gallop is the natural gait of a Thoroughbred, and the action in trotting is low.

The early Thoroughbreds, like their Eastern ancestors, were of various colours, but for many years bays and browns have predominated. Chestnut comes next, blacks are unusual, and grey has practically disappeared. Dun is not a Thoroughbred colour.

The part played by the Thoroughbred on the racecourse naturally bulks most largely in the popular eye, but the breed is no less distinguished for its intrinsic and utilitarian value. It is not too much to say that there is hardly a breed of light horses in the world that is not deeply indebted to the Thoroughbred, and for long past, but particularly during the last 50 years, specimens of the breed have been purchased in large numbers by the Governments and private individuals of nearly all countries in which horses constitute an important branch of live stock.

In addition to speed, the Thoroughbred imparts staying power, endurance, and the spirit to keep going till the last gasp.

HUNTERS.

The Hunter can hardly be regarded as a distinct pure breed at present, but in numbers and value, is of such importance, from both a financial and utilitarian point of view, as to demand a separate and detailed description. The majority of Hunters are not pure bred

animals and naturally there is a good deal of variation in the types required for different classes of country, but almost without exception they are characterised by a considerable proportion of Thoroughbred blood, and, generally speaking, it may be said that the ideal Hunter is a compact, short-legged, well-balanced Thoroughbred, true in his action, bending the knee sufficiently in trotting, moving freely in all his paces and sound in all respects. For ordinary use the height should be from 15 hands 3 inches to 16 hands 2 inches, and though there are innumerable good horses under the former height, there are not many which exceed the latter and at the same time conform to the requirements of a first-rate hunter. Very big horses are apt to be long in the leg, with a corresponding lack of activity and ability to scramble through rough places or to recover after a blunder. It must not, however, be forgotten that, provided a horse is true in shape, well balanced and perfect in every way, the bigger he is, up to a certain point, the more valuable he is.

A Hunter must possess substance and quality with well developed and strong withers, but which are not too high, for such are usually narrow and weak. The shoulders must be long and sloping, the upper parts of the blades not showing under the skin when the animal is trotting. The back should be short, yet the horse should stand over plenty of ground when poised truly on his legs. A broad, level, muscular back is a great desideratum. If the back is rather long, a tendency to a "roach back" with a characteristic little arch at the loins is preferable, and is a conformation possessed by many a first-rate fencer. The loins must be strong and the ribs well hooped, though not too closely "coupled"; unless there is sufficient room between the last rib and the hip bone the hind action will be cramped, and the hind leg cannot be brought forward with sufficient sweep in either galloping or jumping. The quarters must be long and powerful, with a well set on tail and long muscular thighs, and above all it is necessary that the second thigh should be well developed, the thighs running into them so imperceptibly that the whole with the hocks form a sort of V. The opposite conformation, in which the second thigh appears more or less as a parallelogram forming a distinct connection between the hocks and the thighs, is most undesirable.

The hocks must be large and clean with prominent points, and their junction with the cannon bones especially must be strong. If there is weakness here, giving an appearance almost as if a little piece had been cut away in front of the shins, the hocks are weak both for galloping and jumping. In the front limbs the arms must be long and muscular, the knees large and bony, the points of the elbows clear of the body, and the cannon bones short but of good girth and with large, wiry, clean tendons. The feet must be of good size and, whilst the frogs must be well developed, there should be plenty of horn at the heel. A horse with shallow, thin-soled feet may easily be lamed when landing on stones, and cannot stand work on hard roads for any length of time.

The head should be long and lean with good sized ears, and bright, intelligent eyes, and should be well set on an arched, strong neck. There must be plenty of width between the jaws for the passage of the wind pipe, and also to allow the head to bend to the bit; this



HUNTER GELDING, "BROADWOOD."
Winner of many Prizes and Championships.



HUNTER GELDING, "SIGNAL."
Winner of many Prizes and Championships.

space should be sufficient to allow of the insertion of the full length of an outstretched forefinger. All first-rate "stayers" have such room in this region.

A strong constitution is an absolute necessity for an Hunter. He must be able to withstand the fatigue of prolonged and severe exertion, to go many hours without food, and then to be able to feed and rest on his return to the stable. No horse can do this unless he has an ample middle-piece, and though one with light back-ribs may be a brilliant performer, he will require an unduly prolonged holiday after each day in the hunting field. In this respect the value of an Arabian cross is pronounced. Of all horses Arabs bear hardship and fatigue the best, another strong point being the docility and sagacity with which their progeny is endowed, attributes of the greatest importance in a Hunter. The want of size in their immediate descendants is, however, a drawback that the ordinary breeder cannot afford to overlook.

Cross-bred Hunters.—The man who means to be up with hounds, however fast they run, whatever the state of the ground, and however large or intricate the fences, must have a horse that is quite Thoroughbred or very nearly so, such horses for instance, as many of those which have made Ireland famous, and as those which were and are associated with several famous Yorkshire hunting studs. While this is so, it must be remembered that comparatively few of those who compose an ordinary field are thus ambitious, and the majority are satisfied with a comfortable mount which looks well at the Meet, can jump moderate-sized fences with safety, is a good hack and thoroughly sound, and cross-bred animals are equal to their requirements. In breeding such horses, there is little doubt as to the most desirable type of sire—a Thoroughbred—but often there is difficulty and difference of opinion in obtaining suitable mares. Occasionally, good Hunters are bred from light cart mares, but while the plan may be successful now and again, there are many misfits. Many excellent animals are bred from a pony cross, but it is difficult in this case to obtain the requisite size and weight. Generally speaking, ing, the safest plan is to start with a mare of proved worth in the hunting field, and if possible, descended from mares which have also been hunted. Such a mare should be mated with a powerful Thoroughbred of a good riding type, preferably one whose courage and spirit have been proved on the racecourse. This latter is the only way in which the sire can be tested, but a horse should not be selected for his performances alone; it is essential he should have the conformation and the action of a riding horse, and sufficient bone and weight.

The Hunters' Improvement and National Light Horse Breeding Society exists to improve the breed and to promote the breeding of Hunters and other horses used for riding and driving and for military purposes. It holds an Annual Show in London, publishes stud books of hunter-bred stallions, mares, and geldings, and uses means to induce the various agricultural societies to offer prizes at their shows for mares and young stock.

The Royal Commission on Horse-Breeding up to 1911 administered an annual grant of £5,000 for promoting the interests of light

horses. In 1911 this work was taken over by the Board of Agriculture and Fisheries, which in addition is charged with the control of the grant made out of the Development Fund for the improvement of light horses and ponies. (*See* p. 146.)

THE HACKNEY.

History of the Breed.—The Stud Book records of the Hackney commence with the Darley Arabian, but it is possible, and indeed highly probable, that before his arrival from the East in 1706, there was in the Eastern counties of England a more or less distinct breed of trotting horses. Ridgway suggests that this original trotting breed was descended from imported Friesland or Dutch horses. From the Darley Arabian were descended in successive generations, Flying Childers and Blaze—the dams of both being largely of Eastern breeding. Blaze, when mated to what is described as a “Hackney” mare, bred Shales (699) who was foaled about 1755. This horse, also known as the Original Shales, Shield’s or The Schale’s Horse, may, perhaps, be regarded as the founder of the modern Hackney. The breeding of his “Hackney” dam is unknown (as is also that of many others of the early unregistered mares) but it seems highly probable that she was by an Eastern sire out of an English mare and there is no doubt that the Hackney contains a considerable proportion of the blood now concentrated in the Thoroughbred.

Shales (699) had two very famous sons in Scot Shales (692) and Driver (187). The former owes his fame chiefly to his sons Hue and Cry (373) and Thistleton’s Shales (702) and to his inbred grandson and great grandson Marshland Shales (435) immortalised by George Borrow in *Lavengro*.

From Driver were descended in direct line the three Fireaways, Jenkinson’s (201), West’s (203) and Burgess’s (208), the Norfolk Cob (475) and Bond’s Norfolk Phenomenon (522) which five horses, especially the last three, may perhaps be said to have played the greatest part of any in the fashioning of the Hackney of the present day.

It is probable that Lincoln and Cambridge were the counties first associated with the Hackney Breed, but it soon became a favourite in Norfolk whence it spread North to Yorkshire and there, in after years, acquired the title Yorkshire Hackney. At one time there was undoubtedly some difference in appearance between the Yorkshire Hackneys and those of the Eastern Counties—each type being in all probability bred to suit local tastes which varied somewhat. The horses of the former district showed greater quality and were more bloodlike than the latter, which were thicker set and more “cobby.” There was, however, no real fundamental difference between the two branches, both being of the same origin and possessing the same cardinal features. To-day, though there may be some representatives of the old Norfolk strain in existence, free from the blood of horses which had been for some time bred in Yorkshire, the titles Yorkshire and Norfolk Hackney in the main signify a distinction without much material difference. On the whole it would seem that Norfolk is entitled to be called the home of the Hackney.



HACKNEY STALLION, "KING'S PROCTOR."
Supreme Champion, London Hackney Show, 1911 and 1912.



HACKNEY BROOD MARE, "BASHFUL KATE."

Stamina and Longevity.—In modern times the Hackney has become prominent chiefly through his showy action and his unrivalled value as a high-class carriage horse, but in times gone by he was essentially a trotter famous for his feats of endurance and his ability to carry weight in good style at a fast pace. Taking some of the stallions already referred to :—Driver (187) is said to have trotted 17 miles in an hour, while one of his daughters—the great-granddam of Prickwillow (624)—trotted 15 miles within one hour carrying 15 stone. Wroot's Pretender when five years old is said to have covered 16 miles in an hour with 16 stone on his back. West's Driver (188) is credited with $17\frac{1}{4}$ miles in an hour carrying 15 stone, while the Norfolk Cob (475), whom his admirers described as "completely master of 20 stone," covered two miles in 5 minutes 4 seconds. Marshland Shales, one of the most famous of all trotting horses, trotted 17 miles in 58 minutes carrying 12 stone. Norfolk Phenomenon (522) was trotting in matches when he was nearly 30 years old. Instances of noteworthy performances could be multiplied almost indefinitely, but those mentioned are sufficient to show that the old trotters could show exceptional records at a fair collected trot. The longevity and wearing powers of the breed are well known and many cases of both modern and bygone horses could be mentioned in support, *e.g.*, Gentleman John (3624)—whose dam was 33 when she died—was honoured at the London Show of 1911 when he was 21 years old. Rosador (4964) was champion (for the third time) at the same show when 15 years of age. With changing demands the Hackney, like other breeds, has been modified to meet modern requirements. The modern requirement is not for a horse to travel long distances or at a high speed but for a showy, elegant animal with high action.

Characteristics of the Modern Hackney.—The height as a rule is from 15 to 15·2 hands but Hackneys are found up to 16·2 or 16·3 hands, occasionally even more. The general appearance shows compactness and strength. The head should be neat and well formed, with a bright intelligent eye and a pair of well set-up, alert-looking ears ; it should be easily and gracefully coupled to a long neck, clean and well-defined at the throat and terminating (without any signs of weighting or lumpiness at the sides), in a pair of lean, deep and sloping shoulders. The junction of the neck and shoulders should be clearly marked, the shoulder points well defined and the withers fairly prominent but not too narrow. The back must be strong, the loins firm, the croup of good length, straight, and surmounted by a highly carried tail—a drooping croup and a low set tail are most objectionable. The ribs should be deep, round and well sprung ; the quarters deep and shapely. The forearms and thighs should be well clothed with muscle ; the knees and hocks flat and large ; the cannons short with plenty of hard flat bone ; the pasterns nicely sloped and ending in a set of strong hard-wearing hoofs. From a front view the Hackney should be a big, boldly set-up horse having a firm grip of the ground ; well rounded in the ribs and strong and deep through the shoulders and breast, without being too wide between the fore-legs. Excessive width there is apt to cause the horse to go wide, or in a rolling manner, though on the other hand a narrow chest

imparts a weedy appearance and makes the horse liable to cut himself when moving. Viewed from behind, a typical Hackney is square, with muscular thighs and gaskins and with no tendency to being "split up" between the legs (a bad fault); he should stand well at the ground with the hocks neither in nor out. The general appearance should give the impression of a bold, stylish animal eminently fitted for work in harness but also able to carry and keep a saddle in its proper position. Stallions show distinct masculinity all over, especially as regards their heads, crest development and general strength.

The action of the Hackney is unique. He should be a good square walker stepping well out and bearing himself jauntily, but it is in the trot that he excels. He goes with both head and tail well up, the delivery in front is very free from the shoulder, the knee being raised a great height and vigorously snapped in the air; the foot is then shot forward and the whole leg almost straightened out before the foot regains the ground. The hocks are well and vigorously flexed, the hind feet are raised well off the ground and then brought sharply forward and easily replaced in a direct line with the fore ones. Viewed from the side, a good Hackney appears to be stepping well away in front and well under himself behind; in meeting one he should come with great resolution and without any suspicion of rolling, and in leaving one his action should be strong and true.

Heavy plodding action is extremely objectionable, and is generally to be found accompanied by a low, heavy head carriage and a crouching style.

Colour is regarded as a very secondary consideration by breeders, and Hackneys are to be found of all colours and shades. Chestnut of varying hues predominates and is often accompanied by white markings. Bays and browns with black legs are numerous. Red roans are not numerous now but blue roans of marked beauty may occasionally be seen. Chestnuts with roan markings on flanks and quarters are common. Blacks and greys are not often seen. "Off-coloured" animals occasionally turn up.

The Hackney is claimed to be the soundest breed of horses in existence; there is no doubt of his good temper.

Hackneys Abroad.—Hackney exports exceed in number and value those of any other light breed except the Thoroughbred, and horses are sent to almost every part of the globe, the United States, Chili, Argentina, Canada, the Continent and Japan being perhaps the largest buyers, though a brisk and growing demand is springing up in Australia and South Africa.

In America as in other countries the Hackney has surpassed all others in open competition as a high-class harness horse.

The Hackney Horse Society, founded in 1883, looks after the interest of both Hackneys and Hackney Ponies. It does not hold a public sale in connection with its Annual Show (held in London in March) but keeps a sale register on which owners can place the names of exhibited horses which are for sale. The membership of the Society runs to about 2,100 and all the leading home, and most of the foreign breeders are connected with it.



HACKNEY STALLION, "MATHIAS A 1," IN HARNESS.
Prize-winner at the London Hackney Show, International Horse Show, Olympia, &c.



HACKNEY PONY STALLION, "TALKE WILDFIRE," AND HACKNEY PONY MARE,
"BERKELEY LILY."

THE HACKNEY PONY.

The Hackney Pony is frequently described as a small Hackney, but this description is incorrect. It has, it is true, the typical action of the larger breed in its most brilliant and perfect form, but the true Hackney Pony is also essentially a pony with pronounced "pony character" or "pony type." This peculiar and almost indefinable attribute is easily discerned in almost every movement and point, but is perhaps most noticeable in the head (particularly about the ears, eye and muzzle), the neck and limbs, and in the action.

The most famous family, if not practically the race as it is known to-day, was founded by Mr. C. Wilson, of Rigmaden Park, Westmorland, and began with a brown pony stallion, Sir George (778). This pony was a son of a 15·2 hands Hackney horse, Sportsman (796); no one appears to know exactly what his dam was, but by judicious in-breeding of his stock, aided by matings with animals of the blood of the famous Norfolk Hackney, Confidence (158), a tribe of high-stepping and high quality ponies was established.

The Hackney Pony, to be enabled to compete in pony classes, must not exceed 14 hands high, although some good breeding animals just exceed this limit. Like the larger breed, the pony is found in all colours, but the prevailing ones are bays and browns, and with these colours black legs and slight tan markings round the muzzles are favoured as being rather characteristic and often seen in the best specimens. Chestnuts are also common.

THE CLEVELAND BAY.

The Cleveland Bay is the oldest type of the large-size carriage horse, and has existed probably without much variation in the North and East Ridings of Yorkshire for more than 200 years. Hayes traces its origin to Yorkshire cart mares, descended from the old English Black Horse or War Horse, and from a Barb stallion, which latter introduced the universal bay colour, and the dark dorsal stripe very often found. The evidence is not very exact but it is almost certain that Thoroughbred blood was introduced about the middle of the 18th century through a horse called Old Traveller, believed to be a Thoroughbred that travelled in the Yarm district.

Points of the Cleveland Bay.—The points are briefly detailed in the *Cleveland Stud Book*, the first volume of which appeared in 1884, as follows:—"From 16 hands 1 inch to 16 hands 2½ inches in height, he should be possessed of good, sloping shoulders, a short back, powerful loins, and long quarters. His head is rather plain than otherwise, and on the large side, but it is well carried, and his general appearance denotes activity and strength combined in a manner not seen in any other breed. His action is not remarkably high; but it is the kind of action for getting over the ground. In colour he is bay—either light or dark—with black legs, clear of hair; and black zebra-like stripes on the arm and above the hock are sometimes seen. These are known as the "black points" and are supposed to denote special purity of breeding. White, save a

small star, or a few white hairs on the heel, is not admissible, a blaze or a white foot proclaiming at once the admixture of foreign blood."

History of the Breed.—The breed sustained a serious blow when the development of railways reduced the demand for stage-coach horses, and when it became a common practice to breed carriage-horses and other light-legged sorts by mating Thoroughbreds with small farm mares, but it was saved from extinction by being employed in farm work, for which in certain districts it has proved admirably qualified. The *Farmers' Magazine* for 1826 says:—"Probably the best horse for working the lighter class of soils is the Cleveland Bay, an original breed of the country, neither Blood nor Black, that is, a distinct race from the English Blood-horse, and equally distinct from the Black or Cart breed of the country. It was the basis of the breed of the old London Coach-horse, when heavy cattle were used for these conveyances; and, after it became the fashion to adopt a lighter horse for carriages, this valuable breed was allowed almost to become extinct, till their excellence for agricultural purposes was noticed by some practical farmers in the north of England, who for several years have been exerting themselves to revive the breed."

The great power the early type of the breed possessed may be judged by the measurements of Old Cleveland recorded in 1827, as follows:—"When at his full size, in good condition but not full of flesh, he measured 16 hands $1\frac{1}{2}$ inches high, $9\frac{3}{8}$ inches round the pastern, 10 inches round below the knee, 21 inches round the arm, $15\frac{5}{8}$ inches round the knee, and 6 feet 10 inches round the girth. His legs were as clean as a racehorse."

The Stud Book points out that nearly every horse of note belongs to one or other of three great families descended from Dunsley's Dart, Barley Harvest and the Hob Hill Horse. The last, named Farmers' Glory, was foaled about 1798 and Barley Harvest a little earlier.

Value for Crossing.—The great stamina and robustness of the constitution of the breed are valuable assets, and the mares are in high favour for crossing with a view to the production of either carriage horses or hunters.

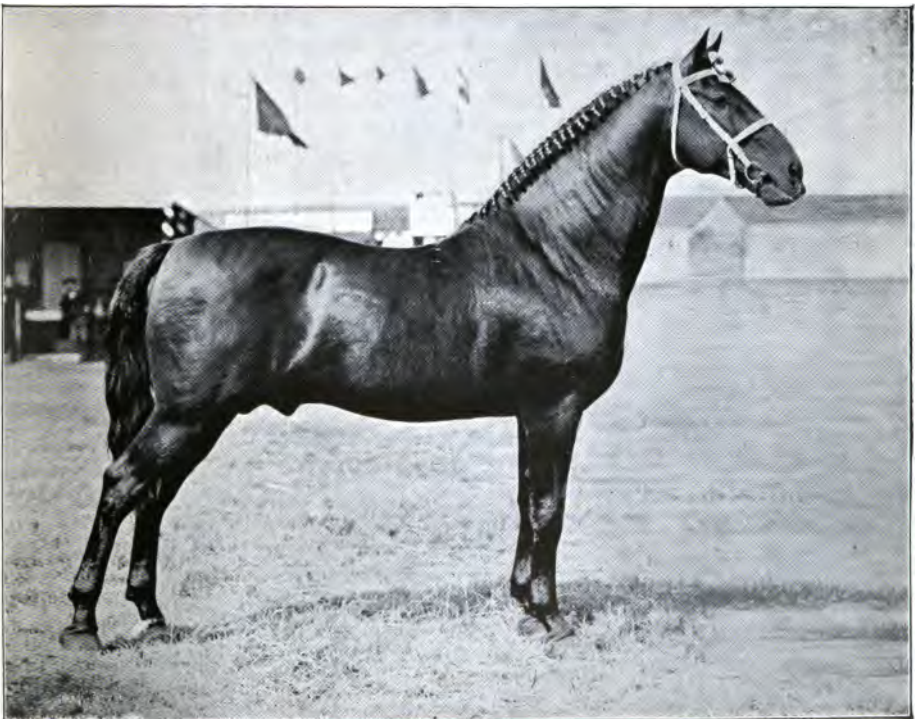
The favourite cross is perhaps that with the Thoroughbred horse, but for breeding carriage horses the Hackney stallion is also used.

THE YORKSHIRE COACH-HORSE.

The Yorkshire Coach-Horse is an off-shoot of the Cleveland Bay, developed in the first instance by infusion of Thoroughbred blood, though it has been recognised as a distinct variety for more than a century. The *Yorkshire Coach-Horse Stud Book* (founded 1887), says of the type:—"It cannot be claimed for the Yorkshire Coach-Horse that he is a pure-bred animal; on the contrary, by the judicious crossing of large-sized good-coloured mares with stallions, altogether or nearly Thoroughbred, a class of horses has been produced suited to the wants and circumstances of the times. By universal consent, the colour should be bay or brown, with black legs, mane and



CLEVELAND BAY STALLION, "ROTHBURY."
First Prize, Royal Agricultural Society's Show, 1901.



YORKSHIRE COACH STALLION, "BREASTON PRINCE."
Champion, Great Yorkshire Show, five times, 1907-1911.

tail, abundant but not curly, the height from 16 hands to 16 hands 2 inches, with fine head, sloping shoulders, strong loins, and lengthy quarters, high-stepping action, good sound feet, flat legs, and abundance of bone and muscle."

The Yorkshire Coach-Horse in some respects strongly resembles the Cleveland Bay, but is taller and shows more style and quality—the head is more refined and the crest more developed; the action also is freer, as well as higher.

The doughty performances of the breed in the old coaching days are worthy of mention:—"Of the speed, power, and endurance of these horses, we have recorded that Dreadnought, by Old Clothier, won a trotting match for £100, carrying 16 stones 16 miles within the hour; Wonderful, a horse that won a high premium at Ripon Show in 1819, had a brother, Pierson's Plato, that trotted 18 miles within the hour, carrying 18 stones; and Bevas Pullen's King William trotted a mile in three minutes at Selby, carrying 14 stones."

In spite of the reduction of the number of horses in the country owing to the increase of motor cars, the prices of the best carriage and harness horses are higher than ever before. There is likely to be always a demand for the best class of Coach-Horses on account of their elegant carriage, symmetrical form and uniformity of type and colour. For many years numbers of the breed have been exported to practically all parts of the world and the stallions have proved themselves to be valuable and impressive sires when crossed with the native light horses.

PONIES.

Distinct breeds of ponies are found in several parts of the British Isles in rough mountain or moorland districts, where they roam about in a half-wild state. The different breeds vary considerably in size and appearance, but they all have certain common characteristics and are probably descended from a common origin, the distinctive features being partly the result of different conditions of environment—soil, food, and climate—and partly due to the infusion of foreign blood and of human selection of the ponies most suited to particular kinds of work required of them in the different districts. Thus the Shetland, the Highland, and the Irish ponies of Galway and Connemara have been used from time immemorial for carrying peat and other burdens. The Exmoor and Dartmoor have always been riding ponies though they too carried a load when required.

Generally speaking, all British ponies have clean cut heads with small ears and full lively eyes, they are extremely hardy, intelligent, amazingly strong for their size, and able to withstand severe climate, and to thrive on inferior food. Another characteristic developed by the conditions in their native haunts is their sure-footedness and activity in rough or hilly ground. In their half-wild condition ponies are liable, as a result of the poor pasture, exposure, and also of the absence of care in breeding, to exhibit certain characteristic defects of conformation, the chief being ewe-necks, low withers, narrow quarters, and sickle hocks, while, when trotting the general tendency is to "go wide behind."

In recent years, as a result of the efforts of the respective Stud Book Societies and of the Polo Pony Society, much greater attention has been paid to the breeding of ponies. Part of the annual grant now made out of the Development Fund for the improvement of light horses is devoted to the native breeds of ponies (*see* p. 146).

WELSH PONIES AND COBS.

The ponies of Wales are claimed to stand in the first rank, and their success in recent years in the showyards, both at home and abroad, gives good support to the claim. They vary a good deal in size and type, but there is little doubt that all are descended from the same stock, variation being due to different crosses and conditions of environment. The Welsh Pony and Cob Stud Book Society looks after the interests of all, and has given a great impetus to the breeds. Eleven volumes of the Stud Book have now been published, and some 150 pedigrees compiled by Mr. C. Coltman Rogers, set forth in the earlier volumes, enable nearly all the ponies and cobs to be traced back to the middle of the nineteenth century.

The Welsh Pony, *i.e.*, the true mountain pony from which the other types are in all probability descended, is included in Section A of the Stud Book. Ponies of this type appear to have existed on the hills of Wales from prehistoric times, and with a few exceptions we have no very exact records of any crosses that may have influenced the breed in the past. At the same time it is known that Arabs and Thoroughbreds have been used from time to time, and in particular the Thoroughbred Merlin, turned down by a former Sir Watkin Williams Wynn, effected great improvement in the ponies on the Ruabon Hills.

The Stud Book recognises the slight divergence between two types of these small ponies of Mountain or Moorland origin; Part I. of Section A comprises ponies up to 12 hands, which when shown, must be neither hogged nor docked, and, unless they are descended from ponies already entered in Section A, must have unquestioned descent on one side or the other (and not further back than from the grandsire or granddam) from animals that have run wild, or were foaled, or usually lived on mountains or moorlands of Wales, or scheduled portions of the border counties. Part II. comprises ponies up to 12 hands, 2 inches, and no restrictions as to showing are imposed. Part I. includes the more Arab-like pony, which is chiefly represented by the progeny of a celebrated and epoch making sire—Dyoll Starlight, the property of Mr. Meuric Lloyd. This pony is the sire of nearly every showyard winner in the last decade, including Greylight—sold last year for 1,000 guineas in Australia,—Shooting Star, Ballistite, and others. Part II. includes ponies of a stouter type showing a good deal of cob character, perhaps more adapted for harness than for riding purposes.

Welsh ponies are found of all colours, but bay, brown, and grey are preferred; dun, chestnut, and broken colours are not so much

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WELSH PONY STALLION, "GREYLIGHT."

Champion, London Polo and Riding Pony Society's, Royal Agricultural Society's, and Welsh National Society's Shows, 1909.



NEW FOREST PONY, "BURTON SLIGO."

esteemed but are not uncommon. They are, as a rule, free and fast movers, and extremely good and sound in the limbs and feet. Their conformation, quality, and general appearance, with their small well-set tapering heads, together with their pluck, endurance, and dash, make them an excellent foundation for the highest class of riding or driving ponies, and, in fact, a very large number, probably about 30 per cent., of the best class of polo ponies are known to have Welsh blood in their veins. Welsh ponies have been used with success to mate with other native breeds, notably on Dartmoor and in the New Forest.

The Welsh Cob.—As already suggested, the Welsh Cob is probably an off-shoot of the Welsh Pony, and the only essential distinction made between them in the Stud Book is one of height. Cobs are entered in Sections C and D, the former perhaps including the typical Cob and being confined to those 13·2 hands high to 14·2 hands high. The full history of the development of the breed has been written by Mr. Chas. Coltman Rogers in the second and succeeding volumes of the Stud Book. Briefly it may be said that Cobs came into prominence with an epoch making sire, Old Welsh Flyer, who traced back on the sire's side to horses of the light cart-horse type, probably the same kind of animal as the "*Equus Operarius*" alluded to in the *Leges Wallicæ* of the tenth century. Old Welsh Flyer was by a horse called Trotting Comet who in turn traced back on his sire's side to horses of the light cart breed. The sire of the dam of Old Welsh Flyer was a half-bred Arab called Cymro Llwyd, who, along with True Briton—a horse out of a Thoroughbred mare by a Yorkshire Coach Horse—and Alonzo the Brave, who on the sire's side was descended from Shales and on the dam's side from the Thoroughbred Premier, were the only three animals which conspicuously figured as out crosses in the Old Welsh Cob. Of late years Hackneys have been more frequently used, and owing to the fact that no Welsh Stud Book was available till 1902, several noted sires, including Old Welsh Flyer, and their descendants, were entered in the Hackney Stud Book. The introduction of Hackney blood is deplored by many of the best supporters of the breed who say that while the Hackney may impart brilliancy in the showyard, there is a danger of the utilitarian and more intrinsically valuable characteristics—hardiness, staying power and all round wearing qualities—which characterises the true Welsh Cob, being lost. At the present time there are signs of a revival of the genuine Cob and premiums have been awarded by the Board with a view to the resuscitation of this valuable old breed.

THE NEW FOREST PONY.

The New Forest Pony is another breed which possesses the advantage of an Association (founded in 1888) devoted solely to its improvement. It takes its name from the New Forest, a Crown property of 70,000 acres in extent which was laid out as a Royal Forest by William the Conqueror. It is believed that horses have there found a home for an extended period, although the type has been subjected to change by the introduction of Thoroughbred

and Arab blood. The large proportion of greys, many of them flea-bitten, among a great variety of colours, is traced to the latter origin. There are not many duns, and but few piebalds left.

The New Forest Pony is below the level of the Dartmoor and Exmoor in the quality of its head and shoulders. Its hocks and feet are, however, both good. In height, the different types, in different sections of the Forest, range from about 12·2 to 13·2 hands, although, when one is removed at weaning, and well attended to during the first two winters, it may rise to 14·1 and make an excellent trapper. "It is a great characteristic of the New Forest Ponies to be always gay and alert, and, though they are extremely good-tempered and docile when fairly broken, they are quite indomitable until they are completely cornered. The true Forester is never sulky."

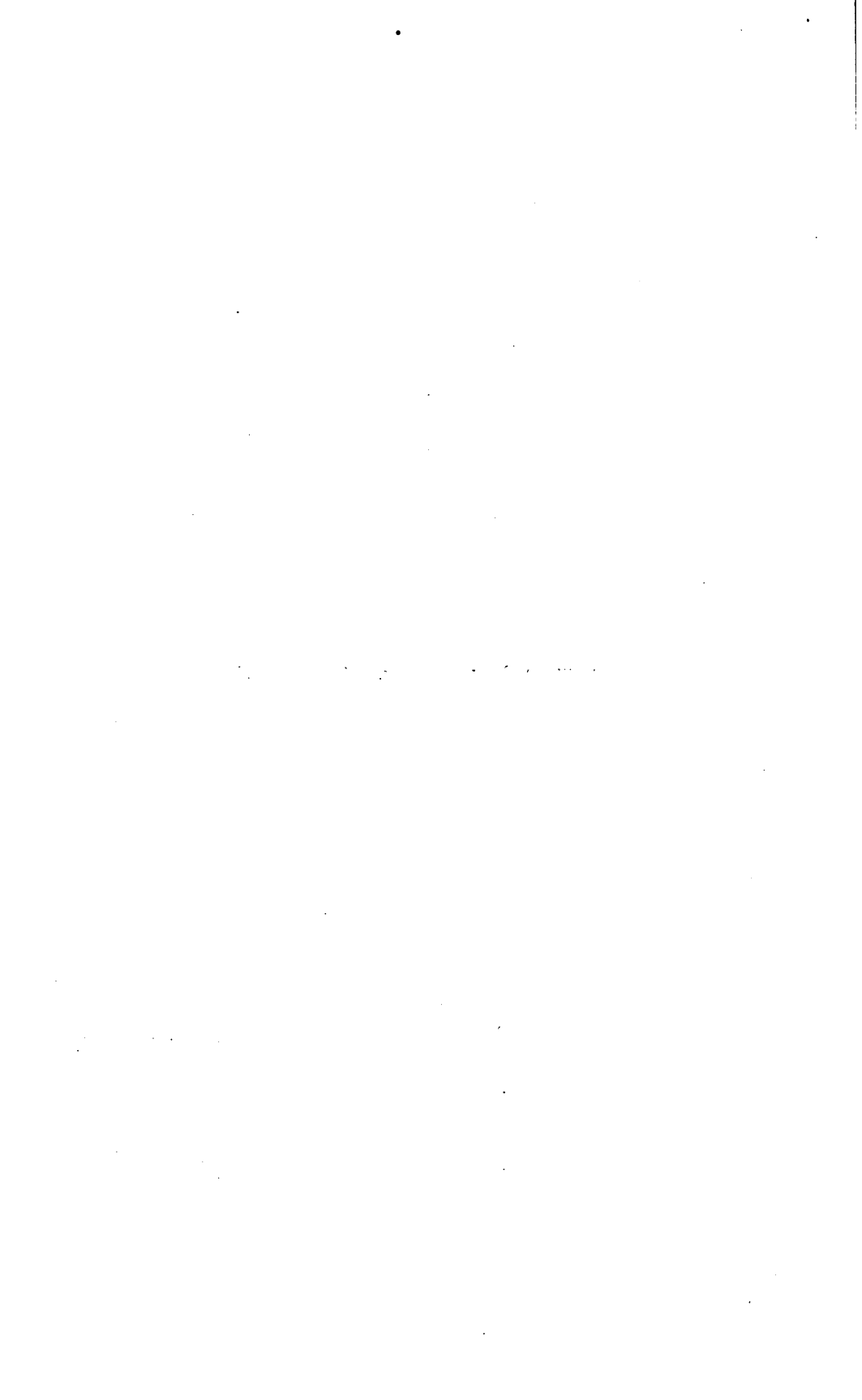
THE DARTMOOR PONY.

Dartmoor Ponies have been highly appreciated from very early times, but, like many moorland and mountain ponies, they have suffered from want of attention in breeding. Until recently selection was left largely to nature, while some of the introductions of fresh blood have been of doubtful value. In common with other pony breeds there is a tendency to drooping quarters and cow hocks, but of late years the work of the various local associations, which are well supported by the pony owners, has resulted in great improvement.

When pure, Dartmoor Ponies are as a rule about 12 hands 2 inches in height, and for hardiness and endurance under a load they are unsurpassed. The square, clean-cut, intelligent head, strikes an observer at once: they have firm hard bone, almost invariably excellent feet, short back well ribbed-up and powerful loins. In the past they have been crossed with Thoroughbred, Arab, and Hackney horses, but the best results have been obtained by careful selection of the best Dartmoor stallions, while for an out cross, which becomes necessary sooner or later, one of the kindred breeds of ponies proves most valuable. Both Exmoor and Welsh have been used with success but the former is generally preferred. The prevailing colours—brown or bark bay—are similar to those of the Exmoor, and probably there is a close relationship between the two breeds.

THE EXMOOR PONY.

There is considerable resemblance between Exmoor ponies and those of Dartmoor, though, as a rule, the former show more quality while the Dartmoor have more weight and substance and are slightly taller—Exmoor ponies running on the moor average from 11 hands 2 inches to 12 hands. A good deal of crossing to produce small active horses of the hunter and polo pony types, is practised on the borders of Exmoor, but the stock actually on the moor is probably of purer descent than most other breeds of native ponies. Two introductions of Eastern blood which had a considerable influence on the breed can, however, be traced—Katerfelto, the hero of many local legends, was a half-bred Barb, as was also Bobby, a well known sire





DARTMOOR PONY STALLION, "GOLDFINDER."



FELL PONY MARE, "GREY LADY."

of later date. Exmoor ponies are brown or buffy bay with mealy noses, and the persistence of the characteristic colour is regarded as evidence of the purity and antiquity of the breed. The head is neat, clean cut and full of character, the ears are neat and the neck is rather short. The shoulders appear short but are set well back making the pony short from withers to croup. The withers are low and wide, the loins powerful and the quarters wide from hip to hip. The forelegs are long in the arm and short in the cannon. The most common defects of conformation, as in all pony breeds, are drooping quarters and cow hocks. Exmoor ponies are valuable foundation stock for the production of hunters and polo ponies being themselves excellent small riding horses. Though small, the Exmoor is full of fire and endurance and will carry a heavy man for a long journey.

THE POLO PONY.

The Polo Pony Society was started in 1893 with the object of improving and encouraging the breeding of high class riding ponies ; and in order ultimately to evolve a distinct breed it has since its foundation periodically issued a Stud Book. The conditions of entry as they stand in 1912 are in effect as follows : Young ponies up to three years old will be received for entry, without a number, in the Supplement to the Stud Book, provided that either the sire or the dam is either registered in the Stud Book or entered in the Supplement. Ponies are also admitted after being passed by inspectors appointed by the Council of the Society, but no pony can be registered in the Stud Book proper unless it conforms to the limit of height. At present the maximum for mares and geldings four years old and upwards is 14·2 hands high. Stallions may be 15 hands. Animals are measured without shoes, or if with shoes, half an inch is allowed for them. In the Polo Pony the native breeds of ponies are the foundation stock into which Thoroughbred and Eastern blood have been infused, and probably owing to the fact that our native ponies have all at various times been crossed with Eastern sires, the blend has been highly successful. The Society has gone far to establish a distinct breed of high-class riding ponies, the young stock of which comes true to type, and which is eminently suited not only for polo but for all work under saddle. At first it was thought there would be difficulty in keeping the height below the 14·2 hands standard, but in practice no such difficulty has been experienced. It is claimed that the breed combines the quality and speed of the Thoroughbred, with the courage, endurance and docility of the Arab, and the hardiness, alertness and activity of the native ponies.

The points desired in a Polo Pony are those common to all first rate riding horses :—He should have a clean well-bred head ; a good, fairly long neck sweeping up from the withers in a graceful curve (a ewe-neck or a short punchy one is most objectionable). The withers should be placed well back, making the back appear short ; the shoulders should be freely used, and must not be round, but nicely sloping, so that the saddle will not slip when the player is leaning over to hit the ball. The loins and quarters should be powerful, the tail smartly carried, the barrel deep and well coupled.

The arms and second thighs should be strong and powerful, knees and hocks clean cut, and the pasterns nicely sloped. Good sound feet and soundness in every respect are essential. As a breed, Polo Ponies are remarkably sound.

The more substance the better, so long as it is free from coarseness. Speed, weight-carrying power, courage, a good mouth, freedom from vice, and balance and quickness in turning at a high speed are essential characteristics of a first class polo pony, which should be, in fact, a miniature blood hunter.

In breeding it is found inadvisable to select for looks alone, and mares which have proved themselves good tractable playing ponies are to be preferred. An animal which has gone through several seasons satisfactorily is likely to transmit her good qualities to her offspring.

THE FELL PONY.

The Fell Pony is one of the largest and heaviest of the English breeds; it stands 13 to 14 hands high and in many ways resembles the Highland Garron. The breed seems to have always occupied the high moorland and mountainous districts of Cumberland, Westmorland, Durham and North Yorkshire, as there is no record of its introduction, though it is probably closely connected with the now almost extinct breed of Galloway Ponies. In fact, in the North of England, where it is bred, it is still commonly called a "Galloway." At the present time Fell Ponies are bred, and range in considerable numbers, on the wild hills of their native districts, though on the lower ground considerable inter-mixing with larger breeds of horses has gone on, and pure bred ponies are not always easy to find. Until 1905 there was no official Stud Book for the breed, but since that date it has been eligible for the Fell Pony Section of the Polo and Riding Pony Society's Stud Book.

A larger breed of the Fell Pony type, 14 to 15 hands high, and known as the "Dales Pony," is to be found in the eastern parts of North Westmorland, the dales of Yorkshire, and parts of Durham.

Fell Ponies are of a thick powerful build, with deep chests and strong loins, and have as a rule better set up tails than other pony breeds. The head is pony-like, with large bright eyes. The legs are clean and flat, with more bone than other ponies—many Fell Ponies measure more than eight inches below the knee—they carry great muscle on the forearm and second thigh, and are extremely powerful both in harness and as weight carriers. The hair, which grows rather freely from the fetlock in winter, almost entirely disappears as the summer coat is assumed. The prevailing colour is black or dark brown, usually without any white marking, but grey is not uncommon.

THE SHETLAND PONY.

The original home of this interesting breed is the most northerly portion of the British Isles, the wind-swept group—almost entirely destitute of trees—of about 100 islands, of which 28 are inhabited. Carved stones recently unearthed in Bressay establish the fact that ponies have existed there from prehistoric times, and probably the Shetland is the oldest and purest, as it certainly is the smallest, of



POLO PONY STALLION, "SPANISH HERO."



POLO PONY MARE, "MAVOURNEEN II."

Winner of First Prizes and Challenge Cup, Polo and Riding Pony Society's Show, 1912.

the British breeds of ponies. Being conspicuously intelligent, docile and easily trained, the Shetland has long been in great favour as a child's first riding pony, and has also been in use for light harness work, either singly or in pairs, and amazing records of its strength and endurance on the road could be quoted.

The great commercial demand for Shetland Ponies may, however, be said to date from their employment in the coal mines of the North of England. In many of these the thin coal seams and consequent low workings necessitate the use of very small ponies, and the Shetland, being the only pony under 10 hands, has had this market practically to itself.

The Shetland was the first of our pony breeds to possess a Stud Book of its own. This was started in 1889—the headquarters are at Aberdeen—and has given a great stimulus to the careful breeding of the ponies, and of late years, owing to the imposition of heavy duties on unregistered animals imported into Canada or the United States, it has proved of immense value to breeders who had the foresight to register their ponies.

Characteristics of the breed.—By the rules of the Stud Book Society, no animal which at three years old exceeds 40 inches in height, or at four years 42 inches, is accepted for registration. This has proved a salutary safeguard against the introduction of alien blood. These are, of course, the extreme heights, and anything from 38 to 40 inches may be taken as the usual height of registered ponies. Instances of animals as small as 26 inches are recorded, but are of doubtful authenticity. Perfectly formed and fully grown specimens from 30 to 31 inches high, are, however, to be obtained. Pure Shetland Ponies of all colours are found, but from an early period blacks and dark browns were reckoned the hardiest and best by the islanders, and these colours have been most favoured by breeders. White markings are viewed with suspicion, and the feet, which are as a rule exceptionally well shaped, should be of good dark horn throughout. A white hoof is rarely seen, except on pied ponies, for which there is a demand in the United States, but whole-coloured animals are most favoured in this country. Grey is probably the rarest colour of all, and was almost in danger of becoming extinct, but an effort is now being made to prevent this.

The following points are regarded as desirable :—

Head small, fine, if anything rather dish-faced; eyes large, intelligent, and set not too high in the head; nostrils wide and sensitive; ears short and well carried; mane and forelock full and flowing.

Body compact, with well-sprung ribs and short straight back; quarters strong and not drooping; shoulders deep and well laid back.

Legs.—The forelegs short, strong and muscular, with great forearm and well-arched knees. Cannon bones short and flat, pasterns clean, long and flexible. The hind legs should have well-developed thighs with no suspicion of being cowhocked.

Feet round, open and of good blue horn.

Tail full, abundant, and well carried.

Action must be true, close and springy—the legs being thrown well from the shoulder, and the hocks well flexed.

General.—The whole appearance should suggest vitality and health, as well as perfect symmetry.

HIGHLAND PONIES.

The general term Highland Pony is often understood to apply to the “Garron” of the central Highlands, but in all probability the smaller pony of the Western Islands has a much better claim to the title and represents the real Highland Pony from which other types have been formed. Mr. Munro Mackenzie describes the small Highland Pony of the Outer Hebrides in the following lines:—“Of the small Highland Pony the Barra Pony might be taken as the type. Most of these ponies might be called plain useful animals but here and there a very beautiful little pony may be found. Their points are : a plain square head, rather long ; a good prominent eye ; a rather short neck ; shoulder a bit straight but very freely used ; deep at the heart ; good back ; rather a short quarter and sickle hocks ; legs good, with a very good quality of bone and very good open feet. Height from 12 to 13 hands on ordinary Barra keep, but if well done they may grow a bit higher. Many years ago there were to be seen some very beautiful little ponies with a decided Arab look, on some of the small islands. There is no doubt that these ponies must have had a strong Arab cross at some time. Colours : dun, grey, black, brown, with some bays and chestnuts.”

A larger pony very similar to the old Galloway Pony is found in Mull, Skye, Uist and Tiree, though, unfortunately, the breed has been crossed almost out of existence. They are characterised by “a fine Arab head, long fine neck, well laid shoulder, well sprung ribs with the best of legs and feet ; in their trot they go a bit wide behind ; they stand from 13·2 to 14·2 hands. This is a most useful type of pony and worthy of encouragement in every way. They can do all the work on Western Island crofts, are good to ride on the hills and make first rate deer carriers. Colours : dun, grey, black, with a few bays and chestnuts.”

The Ponies of the Central Highlands, generally called “Garrons” (the term is unfortunate, as while “Garron” in Gaelic originally meant a stout horse or hack, the word is now usually used in the West in contempt) are the largest of all the ponies in this country and stand about 14·2 hands high, sometimes up to 15 hands, though at that height they lose a good deal of the pony character. There is no doubt that the Garron was developed by introduction of Cart Horse blood into an original breed of ponies, and there is reason to believe that Percherons as well as other heavy horses were used. Most have nice clean heads with bold eyes, though in some cases traces of the Roman nose and other features of the Cart Horse type of head appear. Both horses and mares have fine strong crested necks ; rather heavy shoulders, some fairly well laid ; good strong backs, though in many cases rather long ; strong quarters ; the bone of leg is apt to be rather round. On the whole they are strong





SHETLAND PONY STALLION, "LAIRD OF NOSS."
First Prize, Highland and Agricultural Society's Show, 1892.



HIGHLAND PONY STALLION, "SKERRYVORE." (WESTERN ISLANDS TYPE.)
Champion, Highland and Agricultural Society's Show, 1909 and 1911.

useful animals admirably adapted for all hill-farm work and for carrying deer. The colours are black, brown, dun, piebald, black and white, brown and white, bay, and a few grey mixed or dappled.

THE CONNEMARA PONY.

The Connemara ponies are bred in the rough hilly district of the same name in the West of Ireland where the breed has existed for centuries. As in some other pony breeds there is a good deal of variation in size and type representing differences of environment and varying proportions of the blood of other races. A description of what is regarded as the typical Connemara pony is given in the Polo and Riding Pony Society's Stud Book from which the following is abstracted :—

The Connemara pony should be intelligent, active, and enduring, presenting the outline of a long, low, powerful animal covering a lot of ground. The action should be good and straight ; the colour yellow-dun, grey, or bay ; the height from 13 to 14 hands, with the croup as high as the withers. The head should be large rather than fine, with large eyes ; the ears small and pointed ; the distance between the occipital crest and the eye relatively great, and the distance between the eyes from $7\frac{1}{2}$ to 8 inches. The neck should be strong and of medium length ; the shoulders somewhat straight ; the withers of moderate height ; the body long and deep, mounted on short stout legs. A good back, powerful loins, slightly drooping rounded quarters, well-developed breech, short hard flat "bone" measuring from $6\frac{1}{2}$ to $7\frac{1}{2}$ inches below the knee, and wide open well-formed hoofs, are characteristics of a good specimen of the breed.

BRITISH BREEDS OF CATTLE.

Before detailing the characteristic features of the different breeds of British cattle, it is convenient, in order to prevent repetition, to state briefly the general points which are considered desirable in those kept for different purposes.

Beef Cattle.—The general appearance should be “gay” and suggestive of “quality”; the form compact and well balanced, deep, wide and low set, as opposed to leggy.

The head should be short, the forehead broad and full, especially between the eyes; the face straight, neither dished nor Roman, although the large prominent open nostrils make the junction with the broad full muzzle appear slightly concave; eyes large, placid and clear, indicating a quiet temperament and a tendency to fatten rapidly; the lower jaw, deep, strong, and well covered with muscle; the horn, when present, fine in texture and refined in form; the ears, fairly large and mobile, of fine texture, neatly joined to the head in slightly varying positions in different breeds, well covered with fine silky hair inside as well as outside.

The neck should be short or medium in length, fine and tapering towards the head, to which it should join without thickness or chokiness, but full at the “neck-vein” or “shoulder-vein,” where it merges with the shoulder, the blade of which should fit snugly to the body with sufficient slope to give the animal an easy carriage; the upper line from the top of the shoulder to the poll almost straight, except when it rises in the crest of the bull.

The body should be moderately long, deep, rounded and barrel-like, equally balanced, smoothly covered with firm flesh, especially at the best cuts; free from roughness at the shoulder points and hip-bones; and not patchy at the pin-bones or other parts. The trunk from any point of view should closely resemble a rectangle; the upper and under lines should be straight; the brisket projecting well forward and low and wide, making the fore-legs stand well apart. Narrow-chested animals are usually poor feeders, lacking in the constitutional vigour necessary to make beef economically. The loin should be thick and broad, the flanks full and deep; the ribs long and well sprung, thickly fleshed and both front and back ones well let down; there should be no depression at the heart-girth behind the shoulder or above the flank in front of the “hooks.” The hind quarters should be full and well packed with muscle, long from the hook-bones to the pin-bones, both pairs of which should be well covered with flesh, and fairly wide apart, though different breeds vary a little in this respect; the rump wide and even, the tailhead smooth, with no part rising above the back level; the thighs broad, thick and full, well fleshed down towards the hocks, and also in the inner thigh or twist.

The tail should be fairly fine, set on squarely, so that it hangs perpendicularly; the legs straight, short and strong; the bones fine and the feet shapely. The skin should be of medium thickness for the breed, and soft, mellow and elastic to the touch. The lines of the well-balanced symmetrical body should not be sharp or abrupt, but flowing, with a general balance to please the eye.

Dairy Cattle.—Compared with the beef animal, a typical milch cow is distinguished by her feminine, refined look and leaner appearance, shown particularly perhaps in the head, neck, shoulders, withers, and thighs and limbs generally. At the same time, owing to the greater length and depth of the “coupling” combined with the increased depth and width of the hind quarters, the general outline, whether seen from the side or from above, is more or less “wedge-shaped” instead of being nearly rectangular as in the beef animal. The body of a milking cow should be comparatively long and loose; the skin soft and mellow to the touch and, although fine, not too thin. Soft and silky hair, especially on the udder, is desirable; and the tail should be thin and fairly long.

The true milking type of head is long and lean, with distinct features and of unmistakably feminine appearance. The eye should be full and bright; the nostrils dilated; the windpipe prominent; the ear of medium size and fine texture; the neck slim, fairly long, and free from chokiness at the throat, with thinness of shoulder to harmonise; the junction of neck and shoulder fairly pronounced. The ribs should be long, and the backbone strong and prominent; the “coupling” long and deep, with a fair amount of space between the last ribs and the hook-bones, giving great belly capacity which is essential. The hindquarters carry no surplus flesh, and a great many heavy milkers have a decided rise between the loin and the tail, although a straight back-line is usually considered desirable. The hook-bones should be wide apart and prominent, with a depression or hollow in the quarter, due to the absence of muscle between the hook and pin-bones; the thigh thin and in-curving. The pin-bones should be prominent and fairly wide apart; twist high and open.

The size and shape of the escutcheon, *i.e.*, the area of reversed hairs on the thighs and on and above the udder, is believed by those who accept M. Guenon's theory, to be an indication of the milking powers of a cow. Great width in the lower parts of the area is thought to imply heavy-yielding capacity early in the season, and if width be well maintained in the upper parts, the animal should sustain her yield of milk well to the end.

The Udder.—The udder, consisting of two symmetrical milk glands usually spoken of as four quarters, should be of great capacity but not fleshy, and after milking it should appear to hang in folds of soft elastic skin. The fore-quarters before milking should extend well forward and lie close up to the belly, the hind-quarters being rounded posteriorly and attached high and well back, while the sole of the vessel, from which the teats depend perpendicularly, should be on the whole flat and horizontal, though the actual shape varies according to the breed. The teats, four in number, ought to be well and uniformly apart, equal in size, squarely placed, and large enough to fill the hand; they should discharge easily on pressure, but should not let the milk escape before milking.

The Milk Veins.—Large, tortuous and knotted milk-veins, one on each side under the belly, with at times intermediate smaller

veins, are usually an indication of heavy milking. In "dry" cows the size of the milk-veins can be estimated by the dimensions of the milk-wells, through which the veins pass into the abdomen.

Selection of Bull from a Milking Strain.—In selecting a bull for a dairy herd, a pedigree of performance is, along with purity of breeding, of first importance. Not only should the dam be an outstanding milch cow, but the grand-dams on both sides should have been superior milkers, and the sire should conform to the characteristic breed type. In bulls the prominence and width of the rudimentary teats at the base of the scrotum are often thought to be good indications of the milking character of the udders of the next generation of heifers.

Dual-Purpose Cattle.—The greatest degrees of excellence in both beef and milk production are seldom combined in one animal, but several of the British breeds combine the two characters extremely well; the bullocks are good feeders' and butchers' cattle, the cows are good milkers, and though they necessarily carry little flesh when milking heavily, when "dry" they fatten up quickly and produce good carcasses. In this connection reference may be made to the general belief among breeders of dual-purpose cattle that the milking capacity of a cow is to some extent determined by her treatment as a calf and heifer. It is supposed that keeping in comparatively poor condition when young and putting to the bull at an early age encourages milk production, while the opposite tends to produce a beefy type of animal.

Classification of British Breeds of Cattle.—In some cases it is not easy to classify the breeds exactly, as different strains vary so much; but the following is usually accepted:—

Beef Cattle:—

Some strains of Shorthorns.

Hereford.

Aberdeen-Angus.

Devon.

Sussex.

Galloway.

West Highland.

Dual-Purpose Cattle:—

Some strains of Shorthorns.

Lincolnshire Red Shorthorn.

Red Poll.

South Devon.

Welsh Black.

Longhorn.

Dexter.

Dairy Cattle:—

Ayrshire.

Jersey.

Guernsey.

British-Holstein.

Kerry.

THE SHORTHORN.*

Origin of the Shorthorn.—The Shorthorn, sometimes referred to as "the one cosmopolitan breed," is descended from the old North-East of England cattle, which were numerous represented in the eighteenth century in the counties of Northumberland, Durham,

* See *History of Shorthorn Cattle*. Edited by James Sinclair, London—Vinton and Co., Ltd., 1907.

York (those in Holderness being particularly famous) and Lincoln. The early improvement of the breed was carried out in the counties of Durham and York with the lower Teesdale district as chief centre; thus "Teeswater" became one of the early names of the breed, which was also known as the "Durham." After the designation of Shorthorn had been universally adopted in Great Britain, the name Durham lingered in North America, and it is still in common use in some countries. The old Shorthorn possessed dual-purpose qualities of conspicuous merit, and derived many of its qualities from bulls imported from Holland which, particularly in the seventeenth century, were used to cross with native cows.

Colour.—"Red, white and roan" are the characteristic colours of the breed. Roan, the commonest colour in Great Britain, is peculiar to the Shorthorn and its crosses. A deep cherry red is the colour in highest favour abroad. Red of a light yellowish shade is now disliked, although it was formerly common, and was supposed to be accompanied by superior milking qualities. Distinct "patches" (like those of an Ayrshire) of either red or white are regarded with disfavour. White is out of favour abroad and with most breeders at home, with the exception of those who produce blue-grey cattle by mating a white Shorthorn bull with Galloway cows. The prejudice is, however, not so marked as formerly and quite recently a white bull calf was sold by auction for 1,000 guineas.

Brindled colours, common in crosses with Channel Islands cattle, never occur among pure Shorthorns, and black is not a Shorthorn colour.

The muzzle, palate, lips and eyelids should be flesh-coloured; blackness or cloudiness in the hairless part of the nose is regarded as objectionable; the skin should be of a creamy white colour. The characteristic horn of the breed is short, waxy, flattened laterally, and slightly curved in a forward direction, blunt and free from black on the tips. The horns of cows are finer and longer than those of bulls and curve inwards as well as forward, in both sexes they should however remain almost on a level with the crown. Coarseness and blackness of horn, formerly characteristic of certain strains of Scotch Shorthorns, and cocked horns are objectionable.

HISTORY OF THE BREED.

Although the modern types of the breed were, one after the other, formed during the nineteenth century, there is little doubt that the breed had been previously kept practically pure and jealously tended by a number of breeders for many years. *Coates' Shorthorn Herd Book* was not published till 1822, but for about 50 years before that date prominent breeders had kept records of the breeding of their best bulls. Within the breed itself, cattle of superior quality trace back to a limited number of sires. The Studley Bull (626), calved in 1737, was one of the first impressive sires of which a record remains; but the most famous of all great stock-getters among the foundation animals

of the breed were his great grandson Hubback (319), dropped about 1777, and his intensely in-and-in bred descendants, Favourite (252) and Comet (155).

Early Improvers of the Breed.—Charles and Robert Colling, whose influence was felt soon after 1780, were the two first noted improvers of the breed, though it is incorrect to describe them as its founders. After a visit to Bakewell they adopted his practice of persistent in-and-in breeding with superior animals specially selected and mated. Their names were brought to public notice by their practice of taking striking specimens of the breed for exhibition purposes all over the country. By this means, and by the introduction of the practice of hiring out bulls, the Shorthorn ceased to be a local breed and became widely known and distributed throughout the United Kingdom.

The Booth Shorthorns.—About the beginning of the nineteenth century two of the numerous strains of improved Shorthorns—the Booth and the Bates—took a prominent position under the breeders who formed and established them. Thomas Booth, of Killerby, and his sons Richard and John, with their herds at Warlaby and Killerby, in Yorkshire, developed the line of Shorthorns bearing their name, by the mating of Colling bulls of Hubback blood with cows of good Shorthorn type but of unknown breeding, selected from among the common cattle of the district. These cows were described as “good dairy cows, and great graziers when dry,” and were said to be “of very robust constitution.” The Booths put substance ahead of other points and from the first looked upon beef-making capacity and breadth of back and loins as of more value than a persistent flow of milk.

The Booths adhered to the practices of the Collings,—in-and-in breeding the best cattle to secure quality and uniformity of type, and letting out bulls for hire for one or more seasons. This latter practice, which became general among good breeders, gave a bull every opportunity to prove his worth as a sire, and, as the services of the bull were distributed over a number of herds, it left the progeny of an outstanding sire in the possession of a larger number of breeders than does the modern practice of selling at an early age. In the early years, breeding stock were naturally fed on pasture in summer and on hay in winter. The practice of specially feeding cattle for exhibition and for sale was unknown, and thus the best females, some of which are now injured by excessive feeding, were all saved for the breeding herd. More of the best prizes were taken at shows by Booth cattle than by any other strain, and the name, as well as the compact, short-legged, blocky, fleshy type, became widely known and appreciated in the country. The following were among the most noted families of Booth Shorthorns:—Red Rose, Blossom, Bright Eyes or Anna, Strawberry, Bracelet, Christon, Isabella, Flora or Farewell, Broughton, Charity, and Dairymaid or Moss Rose.

The Bates Shorthorns.—Thomas Bates,* of Kirklevington, in Yorkshire, beginning in 1800, founded the famous line of Shorthorn

* See *Thos. Bates and the Kirklevington Shorthorns*, by Cadwallader John Bates. Newcastle-on-Tyne: Robert Redpath, 1897.



SHORTHORN BULL, "MAJESTIC." (SCOTCH TYPE.)
Winner of several First Prizes and Championships.



SHORTHORN HEIFER, "LADY ANN XXII." (SCOTCH TYPE.)
First Prize, Royal Agricultural Society's Show, 1911.

cattle which bears his name. He did not attempt to grade up cows of common breeding, but procured cattle, both bulls and females, from the Collings; and, being a man of means, and possessing in addition the rare quality of instinctive judgment in breeding cattle, he began under the most favourable auspices.

The tribe by which his reputation was chiefly made was the Duchess—"the highest priced and most widely sought after tribe known in Shorthorn history"—which numbered only 64 females in his possession, but for which he claimed the highest qualities, including milking, that the Shorthorn breed possessed. Duchess by Daisy-Bull (186), said to be the best Shorthorn cow of her time—bought in calf to Favourite from Charles Colling in 1804 for 100 guineas—"gave, on grass alone without other food, in the summer of 1807, fourteen quarts of milk twice a day. As each quart yielded one-and-a-half oz. of butter, her total yield was forty-two oz. a day." Bates was so thoroughly convinced of the superiority of his Duchess cattle that he could find nothing good enough to mate with them, and, thus, while he perfected their symmetry, he ruined their powers of reproduction by intensive in-and-in breeding, and up to 1831 had bred but 32 Duchesses in as many years. In that year he bought Belvedere (1706) from John Stephenson, of Wolviston, for £50, and used him very successfully in the herd for six years. It was from this sire that he obtained the Duke of Northumberland (1940), Bates' greatest bull and champion of England in 1842. The temporary advantage was, however, soon lost; for consanguineous breeding followed, with the result that of 58 Duchess cows old enough to breed, which were in the herd at his death in 1849, 24 had never borne a calf. Bates' cattle, in his own hands and in those of his successors, were more closely bred than the cattle of either the Collings or the Booths.

The Oxford tribe was second to the Duchess in importance among Bates cattle, and the two lines were closely related through the frequent interchange of bulls. The name originated with the Royal Agricultural Society's Show held at Oxford, where Bates achieved the triumph of his life in the show ring by carrying off four first prizes with the Duke of Northumberland and three cows, one of which was afterwards named the Oxford Premium Cow.

Other famous tribes of Bates' Shorthorns were:—The Waterloo, Wild Eyes, Cambridge (Red) Rose, Foggathorpe, Blanche, and Secret.

The dispersal of the Kirklevington herd in 1850 marked an epoch in the history of the Shorthorn, though the prices realized were very low compared with those ruling afterwards—68 animals averaged £67 each. At the time, British agriculture was in a very depressed condition and the worth of the Bates cattle had not been fully realised.

Milk has always been a matter of first importance in the breeding of Bates cattle, and though few pure representatives of either the Booth or the Bates strain are to be found, the remaining Bates animals have been in great demand and have made high prices during the last few years.

Early Exportation to America.—From an early period in the history of the breed numerous importations of good Shorthorns had been made into America, and many prices rising into four figures in dollars had been realised by the importers. The first attempt to establish an American pedigree registry or herd book was made by L. F. Allan, of Black Rock, N.Y., in 1846. The second volume appeared in 1855, but the publication remained a private enterprise until purchased in 1883 by the American Shorthorn Breeders' Association.

Introduction of Shorthorn Cattle into Scotland.—Shorthorn cattle were introduced into the south of Scotland from the North-east of England early in the 19th century by several breeders, who all followed Booth's method of selecting superior cows of the Shorthorn type from the common cattle in the ordinary markets, and mating them with bulls procured from the Collings and other successful early breeders. The first Shorthorn bull to reach Aberdeenshire came from Rennie of Phantassie, E. Lothian, but soon afterwards Captain Barclay, of Ury, by judicious purchases and skilful breeding, became possessed of a fine herd, 80 animals of which were sold in 1838 realising £3,000. This widened the basis of Shorthorn breeding in Scotland. At a second sale in 1847 the herd, numbering 91, sold for £2,825, and passed mainly into the possession of Cruickshank of Sittyton, Campbell of Kinellar, and other successful breeders, who were again stimulated to greater efforts.

The Cruickshank Shorthorns.—The animals bred by Amos Cruickshank (1808–95) who was largely financed by his brother Anthony, were mainly instrumental in drawing attention to the best Scotch-bred Shorthorns. He studied the qualities of the dams and grand-dams of the bulls he used, and paid special attention to massiveness of substance. He regarded a good middle, broad full chest, wide back and deep ribs as points indicative of high capacity for beef production, and of a robust constitution. He had no preference for a Duchess, or a beast of any other favourite strain, without conspicuous individual merit. For over 20 years he scrupulously avoided in-and-in breeding, and the methods established of Bakewell, the Collings, the Booths, and Bates. Ignoring also family line-breeding, on which Bates laid so much stress, Cruickshank selected indiscriminately from the blood of all the great breeders—Colling, Booth, and Bates—and in mating his animals relied on his own judgment, the result of personal experience and close study of the results of others. Up to 1860 stock bulls were mostly purchased, but the unparalleled success of the home-bred bull Champion of England (17526) led to a change of policy which gradually drew Cruickshank, after a preliminary period of cautious line-breeding, into the mistake, made by the Booths and Bates, of mating animals too closely related to each other, and at his death it was generally believed that he could not have long proceeded successfully on the lines into which he had drifted.

Shorthorn Families from the Sittyton Herd.—The following are some of the Shorthorn families latterly evolved from the Sittyton

herd:—The Avalanches, Broadhooks, Butterflies, Brawith Buds, Brampton (and other) Roses, Clippers, Cicelys, Duchess of Gloucesters, Ladies, Lancasters, Lovelys, Lavenders, Nonpareils, Orange Blossoms, Secrets, Spicys, Violets, Venuses and Victorias.

At the Sittyton Sales during the years 1842 to 1876, there were sold for breeding purposes 1,030 bulls averaging £36 12s. 9d. and 321 females averaging £32 14s. 9d.—a total of 1,351 cattle for £48,247, or £35 14s. each. From 1877 to 1889 nearly the whole surplus of young bulls was purchased for North America and Canada. The heifers were also mostly exported. In the 47 years ending in 1889, the sale of 1,912 animals realised over £68,000.

But for the untimely death of W. S. Marr, Jun., in 1904, the Upper Mill Herd would probably have continued to contest with that of W. Duthie, as it did after Amos Cruickshank retired, the claim to represent the central stream of Scotch Shorthorn blood. The influence of W. S. Marr, Sen., who died in 1898, is still recognised in such favoured families as the Maudies, Missies, Princess Royals, Alexandrinas, the Roan or Red Ladies, Bessies, Claras, Emmas, Goldies and Sittytons. Mr. Duthie was fortunate in securing 18 cows from the Sittyton herd at its dispersal in 1889, and this addition to his herd, together with the previous use of Field Marshal (47870), “the greatest of the latter-day Cruickshank bulls,” gave the Collynie herd a lead which it has maintained in Scotland.

Introduction of Scotch Shorthorns into English Herds.—Mr. J. Deane Willis, of Bapton Manor, Wiltshire, bought, on the dispersal of the Sittyton herd in 1889–90, 33 yearling Sittyton heifers, and their success in this already outstanding English herd, together with the success of the progeny of Field Marshal in the Royal Herd at Windsor, did much to bring Scotch Shorthorns into favour with English breeders. While Scotch Shorthorns did much to invigorate the breed as a whole and to remove the results of in-breeding, they introduced some irregularity of type. English cattle crossed with animals of the Cruickshank family suffered in milking properties, and to some extent in outline. The original Shorthorns were superior to the Scotch in the shape of the head and also in the hind quarters.

Shorthorn Herd Books.—In the *Coates' Shorthorn Herd Book*,—which is the record of the United Kingdom—“no bull is eligible for insertion unless it has five crosses, and no cow unless it has four crosses, of Shorthorn blood, which are, or are eligible to be, inserted in the Herd Book.”

In France, the last sire in the pedigree must have been born in 1830, or before it, to enable an animal to be entered.

For the Herd Books of Canada and the United States, “the pedigrees of imported animals shall themselves trace and all their crosses to an animal that was either entered or was eligible for entry in Vol. 40 of Coates's Herd Book.” Until about five years ago the Volume was No. 20.

For the Argentine Herd Book, pedigrees must “trace in an unbroken succession of named dams and registered sires to a *named* dam born in or before 1850. In the event of the date of birth of the last named dam being unknown it is then required that her sire shall

have been born in or before 1845. No break must occur in the pedigree, such as an unregistered sire or an unnamed dam, or the 'son of' a registered bull, when he himself has not been entered, unless a dam above such break can be proved to have been born in or before 1850."—SINCLAIR.

Outstanding Characteristics of the Shorthorn.—Perhaps the two most striking characteristics of the breed and those in which it surpasses all others, are its adaptability and impressive power. It has been exported in large numbers to practically all parts of the world; changes of soil, climate, and food affect it comparatively little, though size and quality appear to be fully retained only in temperate climates where food is fairly good and plentiful. No other breed has the same power of imparting to others its own good qualities, and it is unequalled for improving and grading up common or scrub cattle of almost all kinds. For size, weight, symmetry, early maturity, and feeding qualities, Shorthorns are second to none, and very few breeds surpass them for quality of beef and carcass. While some strains may be regarded as almost purely beef animals and are poor milkers, the typical Shorthorn and the majority of Shorthorns (*i.e.*, including non-pedigree) in this country are dual-purpose animals; and they can be bred as milk producers of the very first rank.

SHORTHORN CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs.	mths.	days.	cwt. lb.	lb.
I. Steers not above 2 years...	82	1	10	9	12 75	2 09
II. Steers above 2 not above 3 years.	62	2	10	2	16 84	1 81
III. Heifers not above 3 years	48	2	8	16	14 90	1 68

(b) *Highest and Lowest Daily Increases.*

—		Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs.	mths.	days.	cwt. lb.	lb.
Class I. Youngsteers ...10 best ...		1	9	3	13 73	2 38
	10 worst	1	11	7	11 70	1 84
„ II. Old Steers ... 8 best ...		2	8	25	18 20	2 04
	8 worst	2	11	5	15 24	1 59
„ III. Heifers ... 6 best ...		2	4	23	14 85	1 89
	6 worst	2	10	4	13 65	1 47



SHORTHORN BULL, "BIRDSALL CRÆSUS." (BATES' TYPE.)
Winner of numerous Prizes.



PEDIGREE SHORTHORN DAIRY COW, "PRICELESS PRINCESS."
Champion in Dairy Classes, Royal Agricultural Society's Show. 1907.

THE PEDIGREE DAIRY SHORTHORN.

It cannot be disputed that, while all through last century breeders of pedigree stock practically confined their attention to beef production, the original Shorthorn cattle were as famed for milk production as for beef. Even after the "Improved" Shorthorn had been developed by the Collings, milk production was one of the recognised qualities of the breed, and reference could be made to several well-known and highly bred cows possessing outstanding merit in this respect, *e.g.*, Bates' famous Duchess already mentioned, p. 39.

It must be remembered that until the last decade or two of the nineteenth century, milk selling was the practice only in the immediate neighbourhood of towns, and in their eagerness to develop early maturity and heavy flesh production, which were the principal requirements both at home and abroad, breeders, perhaps not unnaturally, neglected milking powers, which inevitably became erratic and uncertain, and only now and then a deep milker would appear to remind the owner that the original Shorthorn was essentially a dual-purpose animal.

The low ebb to which the milk production of most herds had fallen, stimulated the desire on the part of a limited number of breeders, more than half a century ago, to regenerate the milking powers by using bulls in their herds derived from heavy-milking cows. A still greater influence was the rapid growth of the dairy industry in Great Britain and abroad, particularly marked in the latter part of the last century.

A number of leading breeders took the matter up, but it was not till 1901 that, mainly owing to the efforts of Mr. Richard Stratton, the late Mr. Geo. Taylor, and the late Mr. John Thornton; the Shorthorn Society commenced giving prizes for Shorthorn cows showing dairy qualities. In 1905, the Dairy Shorthorn (Coates's Herd Book) Association was formed to control the movement and to encourage other breeders of pedigree Shorthorns to take part in it.

The conditions regulating entry in the Herd Book (Coates's) are the same as for other Shorthorns, but the members of the Association keep milk records in addition to the pedigree registers of the Shorthorn Society. In conjunction with the Shorthorn Society, the Association offers prizes at the principal shows for pedigree Shorthorn cows under the following conditions:—All cows and heifers competing in any class, in which the Association offers prize money, are clean milked out on the evening previous to the show. On the following morning all cows and heifers are milked in the presence of the judge, who sees each animal's milk weighed. Any animal not yielding up to the Association's standard is not eligible for a prize. The standard is graduated according to the age of the cow and the period which has elapsed since calving. A cow four years old, calving less than three months before the first day of the show has to give not less than 25 lbs. of milk at the one milking.

Cows or heifers which yield the stipulated quantity of milk under these conditions, whether they receive a prize or not, are awarded a Certificate of Merit on notification of the certified weight of milk to the Secretary of the Association.

A Bull, to be eligible to compete in classes towards which the Association contributes all or part of the prize money must be entered in Coates's Herd Book and his dam and his sire's dam must have received the Association's prizes or certificates of merit as explained above, or else they must have had a yearly milk record above certain standards. In the case of cows four years old and over, the minimum is 8,000 lbs. and in the case of cows under four years 6,000 lbs. of milk per annum. The ages of cows are calculated to September 30th, this being the date on which the annual records close.

Perhaps of even greater importance and value is the keeping of milk records. This is carried on under the inspection of the Association and the results are recorded in the Year Book. In the following table are given the average results of the last four years, October 1st, 1907, to September 30th, 1911. In most cases the milk is weighed daily, but in some, bi-weekly or weekly. The records are kept all the year round and date from year to year, so that no allowance is made for abnormally short or long periods of lactation. The proportion of such is, however, very small and the figures may be assumed to apply to normal animals calving at about the same time each year. In making the averages, all animals have been included about which sufficiently complete information is given, and it goes without saying that all are entered or are eligible for entry in *Coates's Herd Book*.

Milk Records—Pedigree Dairy Shorthorns, 1907–1911.

Number of calves which the cow has produced up to end of year.	Average number of days in milk during the year.	Average weight of milk produced per annum—lb.	Number of cows from which the averages are taken.
1	306	6,372	38
2	304	7,277	74
3	297	7,750	81
4	298	7,909	72
5	302	8,099	71
6	287	7,668	48
7	291	7,611	42
8 and more	296	8,415	46

THE NON-PEDIGREE SHORTHORN.

An account of the Shorthorn would be incomplete without reference to the practically pure, but non-pedigree, Shorthorn cattle bred in great numbers in most parts of the country, but, particularly in the North of England and Cheshire, and adjoining districts. These cattle are in most cases descended from the old cattle of the North East of England to which all Shorthorns owe their origin. Generally, pedigree bulls are, and have been, used in the herds, and the cattle are of practically the same breeding as the modern pedigree Shorthorn. An important difference is, that while many breeders of pedigree cattle have neglected milk production, these commercial cattle have always been selected for the two qualities—heavy milk production in the milking period and beef production in the bullocks and “dry” cows.



NON-PEDIGREE SHORTHORN DAIRY COW, "PHYLLIS."
*Champion, Birkenhead, Royal Lancashire, and Cheshire Agricultural Society's
 Shows, 1909.*



LINCOLNSHIRE RED SHORTHORN COW, "BENNIWORTH BLOOM."
Champion, Royal Agricultural Society's Show, 1911.

A very similar class of animal now prevails in Ireland. A hundred years ago, the Longhorn, introduced from Lancashire and other parts of England, predominated and for a long time held its own; but gradually the continued importation of Shorthorn bulls produced its effect. In more recent times, the Royal Dublin Society and the Irish Department of Agriculture have paid much attention to the improvement of the cattle of the country, and their efforts have largely taken the form of encouraging the use of good Shorthorn bulls. Large numbers of Irish Shorthorns are sent over every year as stores to the fattening districts of England and Scotland.

THE LINCOLNSHIRE RED SHORTHORN.

The preface to the Herd Book states that this variety of the Shorthorn is distinguished by its length of frame, good constitution, great hardiness, capacity for milk, and weight of carcase.

It may be regarded as a strain of Shorthorns which has been selected for milk production and for colour, and escaped the excessive in-and-in breeding so prevalent among Shorthorns during the nineteenth century. In other respects Lincoln Reds are in no way different from the ordinary Shorthorn, and the Lincolnshire Red Shorthorn Association allow a red Coates's Herd Book bull to be used, and admit the produce into their Herd Book.

Thomas Turnell, who, about the end of the eighteenth century, founded a famous herd of cattle near Wragby, is believed to have introduced and fixed the deep cherry red colour of hair for which the breed is now noted and which enhances its value for exportation, especially to hot countries. The separate Association and Herd Book were instituted in 1895.

Lincolnshire Red Shorthorn cows have during recent years occupied prominent positions in the Milk and Butter competitions at most of the leading English and Irish Dairy shows, and the breed is growing in popularity at home and abroad.

The Association has not up to the present instituted an official scheme for the keeping of milk records, but some of the leading breeders keep private records. The results obtained in one or two herds may be quoted, though it is necessary to bear in mind the fact that it would be quite unfair to compare the results in selected herds of one breed with general averages of another.

Burton Herd of Lincoln Red Shorthorns—Milk Reccrds, 1906-10.

Number of calves which the cow has produced up to the end of the year.	Average number of days in milk during the year.	Average weight of milk produced per annum—lb.	Number of cows from which the averages are taken.
1	294	6,872	63
2	294	7,571	48
3	296	8,667	56
4	287	8,759	34
5	301	9,393	17
6	287	8,909	13
7	315	9,726	10
8 and more	301	10,043	11

Bracebridge Heath and Reepham Farm Herds—Milk Records.

Herd.	Period.	Number of animals (cows and heifers).	Average weight of milk produced—lb.	Average number of days in milk during the year.
Bracebridge Heath	Oct. 1, 1907–Sept. 30, 1908	40	7,668	277
" "	" 1908– " 1909	25	8,244	253
" "	" 1909– " 1910	25	8,029	246
Reepham Farm " ...	1910	32	8,315	305
" " ...	1911	23	8,679	300

THE HEREFORD.

The Hereford,* although only a local breed in England, has become almost cosmopolitan in its distribution and it is perhaps the most highly esteemed breed for open ranges in Australia and in both North and South America. This prominence may be attributed to the high quality of the beef, the docility, activity and ability of the animals to travel long distances, together with their value for crossing with other breeds, but above all to their hardiness of constitution and ability to grow and fatten where grass is neither plentiful nor of high quality.

Appearance.—The characteristic features of the Hereford are :—The face, the throat, the belly, the brisket, and the inside and lower parts of the legs, and the tip of the tail are white, with a strip of the same colour along the top of the neck and the anterior part of the back; the greater part of the body is red or brown, varying from a light to a dark shade. The hide is thick yet mellow, and is well covered with soft glossy hair which has a tendency to curl. The body is uniformly covered with flesh; and the twist is also good. The setting on of the tail is not so square as in the Shorthorn, and the whole conformation of the hind-quarters is more rounded, after the type of the Aberdeen-Angus. The muzzle is white or flesh-coloured, and the horns yellow or white and waxy. The breed is claimed to be particularly free from tuberculosis.

Some strains of modern Herefords have a tendency to delicacy in the eyes when exposed to the influence of a tropical or semi-tropical sun, owing to the albino-like deficiency of protective pigment in that delicate region. A brown patch on the eyelid or the immediately surrounding parts, or rather the pigment correlated with this external evidence of its presence, is the best protective against the sun, and animals so protected are preferred by exporters.

Origin of the Breed.—The breed, like the Devon and Sussex breeds, is believed to have descended from the old Red cow of Southern England, and, about a century and a quarter ago, it was

* See *History of Hereford Cattle*, by Macdonald and Sinclair. London: Vinton and Co., Ltd., 1909.



HEREFORD BULL, "DOLLYMOUNT."

Champion, Royal Agricultural Society's Show, 1911. Champion, Herefordshire and Worcestershire Agricultural Show, 1912.



HEREFORD COW, "SHELSLEY PRIMULA," AND CALF.

First Prize, Herefordshire and Worcestershire Agricultural Show, 1912.

generally whole-coloured "brown or reddish-brown with not a spot of white." Up to the beginning of the 19th century, the main object for which the breed was kept was the supply of draught oxen, which grew to an immense size in height at the shoulder. Most of them were fed off about six years old, before the animals had passed their prime or begun to fall off in weight as well as in quality of flesh. Since the latter part of the 18th century, Hereford bullocks have had a high reputation as graziers throughout the Midland and Eastern counties of England; and in the early days of the Smithfield Club, before continuous house feeding became common, the breed held a wonderful record as grazing beef-producers. "During the first 52 annual meetings of the Smithfield Club, when all breeds met in open competition, 185 prizes were awarded to Hereford steers or oxen, while only 190 fell to the lot of all the other breeds or cross-breeds put together."

Early Breeders. — Benjamin Tomkins (1748-1815) was the principal improver of the breed. He paid no attention to uniformity of colour, and as late as 1846, when the Herd Book appeared, there were four colour divisions, distinguished by the face being mottled, dark grey, light grey, or white. Only white-faces are now left among pure-bred cattle. Tomkins adopted Bakewell's system of in-and-in breeding and the best of his famous herd sprang from two cows and one bull. He imitated Bakewell in keeping his methods of breeding secret, and, like Bates, he did not exhibit his cattle at agricultural shows. "He was a peculiar, proud, exclusive kind of a man and regarded the cattle belonging to others as quite beneath his notice, considering his own to be beyond comparison the best." The herd, numbering 28, was sold by auction four years after his death for £4,172, an average of £149.

The name of John Hewer (whose activities extended from 1803 to 1873) will always be associated with the history of the improvement of Hereford cattle. It would be "difficult to find a single animal of note at the present day that does not inherit the blood of Hewer cattle." The influence of this blood (which traces back to Richard Tomkins' Silver cow of 1720) was exerted upon surrounding herds by the practice of letting out bulls. It is to Tomkins' Silver bull (41) that the modern Hereford is mostly indebted for its uniformity of colour and for a good deal of the massiveness of flesh and the prominent eyes characteristic of the best specimens of the breed. He was not of a silver grey colour, as is frequently inferred, but a red bull with a white face and a little white on his back; his dam was a cow called Silver.

Albion (15027) was the most successful sire of recent years; no Hereford bull except Lord Wilton has got so many winners at shows. Ancient Briton (15034) was bred at Leinthall on the same lines as the two Aldforton bulls, Lord Wilton and Regulator. Sold to go to the World's Fair at Chicago in 1892, he won there first prize and champion prize as best Hereford. He next took first prize and champion of all breeds at the great Show at Illinois; first and champion at the Iowa State Fair; first and champion at Nebraska and other State Shows.

Milking Powers of Herefords. — Hereford cows are as a rule only moderate milkers, and as calves are usually allowed to suck their

dams the opportunity of selecting the best milkers to build up a milking strain does not often occur, although heavy-milking cows occasionally appear.

HEREFORD CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights, and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs.	mths.	days.	cwt. lb.	lb.
I. Steers not above 2 years...	65	1	9	29	12 69	2.12
II. Steers above 2 not above 3 years.	48	2	9	12	16 81	1.84
III. Heifers not above 3 years	33	2	7	26	14 28	1.65

(b) *Highest and Lowest Daily Increases.*

—	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
	yrs.	mths.	days.	cwt. lb.	lb.
Class I. Young steers ...8 best...	1	9	11	13 95	2.39
...8 worst	1	10	22	11 61	1.87
" II. Old steers" ...6 best...	2	7	24	17 85	2.06
...6 worst	2	10	4	15 42	1.66
" III. Heifers ...4 best...	2	1	22	13 90	1.98
...4 worst	2	10	18	13 58	1.44

THE ABERDEEN-ANGUS.*

This breed of black polled cattle is native to Forfarshire (Angus), Aberdeenshire, and the surrounding districts. The origin of the breed is somewhat uncertain, but the existence of hornless black cattle in these north-eastern counties was recorded as early as the middle of the sixteenth century.

Improvers of the Breed.—The first great improver of the breed was Hugh Watson, tenant of Keillor (Forfarshire), which he entered in 1808. He received from his father six of his "best and blackest" cows, and he followed this up by purchasing in the local markets the best cattle obtainable. While perhaps collectively the greatest part of the early work of improving the breed was carried out by Forfarshire breeders, individually they were all eclipsed by William McCombie (1805-1880), of Tillyfour, Aberdeenshire, who did more than any other single person to secure for the

* See *History of Aberdeen-Angus Cattle*, by J. Macdonald and J. Sinclair. London: Vinton and Co., 1910

breed its world-wide reputation. In addition to other noteworthy performances he carried off two champion prizes of £100 each at the Paris International Exhibition of 1878 for (1) the best group of beef-producing animals in the exhibition; (2) the best group of foreign cattle. It is worthy of note that in the latter class, in which 17 breeds were represented, the second prize also was obtained by Aberdeen-Angus cattle, the group shown by Sir George Macpherson Grant, of Ballindalloch, Banffshire, another noted breeder.

The two most famous and most numerous represented tribes of Aberdeen-Angus cattle are the Prides of Aberdeen and the Ericas. The former family was founded by McCombie, the first Pride of Aberdeen (581), calved 1857, being descended from Queen Mother (348), which he bought as a yearling. The first Erica (843) was calved in 1857 at Kinnaird and was sold in 1861 to Sir George Macpherson Grant, in whose herd at Ballindalloch the line was built up. The most favoured branch is the one which arose from the mating with McCombie's bull, Trojan (402), a half brother of the first Pride of Aberdeen. Other famous families are the Jilts, Ruths and Vines of Tillyfour, Princesses of Kinochtry, Lady Fannys, Mayflowers of Easter Tulloch, Queen Mothers, Roses of Advie and Westertown, Miss Burgesses, Lady Idas, and Blackbirds.

In recent years no other breed has been so successful in open competition at the chief Fat Stock Shows, *e.g.*, at the Smithfield Show in the last twelve years six Championships and five Reserve Championships have been gained by Aberdeen-Angus cattle. In the Carcase Competitions the results are still more remarkable, as in the last twelve years an Aberdeen-Angus or an Aberdeen-Angus Cross beast has won the Championship at every show. Similar results have been obtained at other leading Fat Stock Shows not only in the United Kingdom but also abroad, as, *e.g.*, at the International Exhibition at Chicago, where in the last twelve years Aberdeen-Angus cattle have secured the Championship for the best steer eight times; that for the best car load of steers nine times; and that for the best dressed carcase eleven times.

As formerly, the headquarters of the breed are still in the North-eastern counties of Scotland, but numerous herds of the first rank are found in other parts of Scotland and in England and Ireland. In Canada and the United States, their development has been phenomenal. As far as is known, in 1873 there was not a single animal of the breed in North America; to-day the Aberdeen-Angus is almost, if not fully, as well known and widely distributed as the Hereford.

Distinctive Characteristics.—In the north-eastern counties of Scotland, cows of the breed are used fairly extensively for dairying purposes, but it is as a beef producer that the breed excels, and for symmetry, quality of carcase, and excellence of beef, it is second to none. On an average the cattle do not reach the same size as Shorthorns and Herefords, though the difference is much less than it appears. Their short fine legs and compact form make them look rather smaller than they really are. They weigh remarkably well for their size, and no breed gives a higher percentage of carcase in proportion to the live weight—it is recorded that on one occasion

an Aberdeen-Angus heifer dressed 76½ per cent. of the live weight. Compared with the Shorthorn, the form is altogether rounder and more compact, though slightly longer in proportion to the height; the hook bones and pin bones are not so wide and prominent. The fineness of bone, the quality and "levelness" of flesh are notable, and even in very fat and old animals there is little tendency to "patchiness."

The poll should be distinct, unlike the flatter poll of the Galloway. The colour should be black, though a little white on the underline behind the navel is permissible. The coats of calves and the winter coats of older cattle usually show a dull brown tinge.

Value for Crossing with other Breeds.—The Aberdeen-Angus and the Shorthorn cross successfully either way, though on account of the smaller number of the "blacks," the commonest cross is the black bull with Shorthorn heifers or cows. Except where the Shorthorn parent is almost or entirely white, the majority of the first crosses are black and practically all are hornless, though some show scurs. Such crosses with pure or high grade Shorthorns, or with other beef-producing breeds, are noted for symmetry, early maturity, and the production of high quality beef. Animals of this class are always prominent at the leading Fat Stock Shows. As a pioneer improver among poor unimproved breeds such as the native or scrub cattle of many countries, the Shorthorn bull takes the first place, but when crossed with cows containing a good proportion of Shorthorn blood, the Aberdeen-Angus bull can always be relied on to produce a most excellent type of beef animal.

Aberdeen-Angus Cattle Society.—In 1862, the *Polled Herd Book* was established, and included both Aberdeen-Angus and Galloway cattle. After the issue of the fourth volume, a separate Herd Book was instituted for the Galloways; since 1879, the *Aberdeen-Angus Cattle Society* has undertaken the registration of the breed, and the duty of looking after its interests. In 1900, an *English Aberdeen-Angus Cattle Association* was formed with the main object of holding an Annual Spring Show and Sale of young bulls and females at a convenient centre for English breeders and buyers. This has usually been held early in March, at Birmingham. The Association also offers champion medals and prizes at the English Shows.

ABERDEEN-ANGUS CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs.	mths.	days.	cwt. lb.	lb.
I. Steers not above 2 years...	95	1	10	10	12 57	2·06
II. Steers above 2 not above 3 years.	61	2	9	22	16 41	1·79
III. Heifers not above 3 years	77	2	9	27	14 71	1·59



ABERDEEN-ANGUS BULL, "WILDGRAVE OF BALLINDALLOCH."
Champion Bull, Royal Agricultural Society's Show, 1911.



ABERDEEN-ANGUS COW, "JUANISTA ERICA."
Champion, Royal Agricultural Society's, and Highland and Agricultural Society's Shows, 1911 and 1912.

(b) *Highest and Lowest Daily Increases.*

—	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
	yrs.	mths.	days.	cwt. lb.	lb.
Class I. Young steers ...12 best ...	1	9	8	13 62	2·35
12 worst	1	11	1	11 20	1·78
" II. Old steers " ... 8 best ...	2	9	4	18 35	2·03
8 worst	2	9	5	14 37	1·59
" III. Heifers " ...10 best ...	2	7	16	15 41	1·79
10 worst	2	10	9	12 98	1 38

THE DEVON.

General Appearance of the Breed.—The Devons,* (sometimes spoken of as "North Devons" to distinguish them from the South Devons) the "Red Rubies" of the west, spring from a hilly region of limited area in the north of Devonshire. Like the Aberdeen-Angus they are almost perfect in symmetry, and produce beef of the finest quality. While nearly related to the Hereford they more strongly resemble the Sussex cattle, and might even pass for a small variety of that breed, though the general colour is a brighter shade of dark cherry-red. The whole-red colour of the hair is frequently varied by distinct dappled markings; the skin is generally orange-yellow, but inside the ears orange-red. The characteristic pigment is conspicuous round the eyes and muzzle. The horns of the female are medium in length and elegant in their outward and upward sweep, creamy-white, sharp-tipped, and black-pointed. The horns of the bull, as in the related breeds, are thicker, straighter, and less elevated.

Origin.—The origin of the breed is lost in obscurity, but it is undoubtedly very ancient, probably going back in part to the primeval cattle of this country mated with one or more of the breeds historically accredited as progenitors. Devon cattle in George Culley's time (1794) were of a high-red colour with a light dun ring round the eye and muzzle, which was again recorded in 1810. The breed was early noted for hardiness and activity and the bullocks for special adaptability as work animals.

Early Breeders.—Francis Quartly, of Great Champson, was the Colling of the Devon breed. During a period of thirty years' depression, prior to 1823, "he determined to buy quietly all the good stock" he could find. He continued this practice in addition to that of in-and-in breeding to "improve his stock, till he brought it to perfection" and made the Champson herd the fountain head of the breed. Among many good local breeders, William Davy, at Flitton, and Merson, at Brinsworthy, deserve special mention; outside the county the Holkham herd (established

* See *History of the Devon Breed of Cattle*, by James Sinclair. London: Vinton & Co., Ltd., 1893.

1791) of Coke, first Earl of Leicester, was the most famous. From Holkham, Devons were first exported to the United States.

Value of the Devon Breeds for Semi-tropical Climates.—As a ranching breed the Devon comes next to the Hereford and the Shorthorn. It is smaller in size than either of those two breeds, and has been found to do well in North and South America, Australia and South Africa. The colour of its skin and hair supplies a degree of natural protection against the sun, which makes the breed more suitable than light coloured breeds for semi-tropical countries.

Larger Local Types.—In the lower and richer country, especially in Somerset, away from its original home, the Devon breed has developed greater substance than it attains in its natural habitat; but, though probably improved in some respects as the result of a more favourable environment, it tends in a few generations to gain strength of bone and to lose its distinctive characteristics. The more massive variety is growing in favour with foreign buyers.

Milking Qualities.—The original Devons were a working and grazing breed and the average cow is only a moderate milker, though greater attention is now paid to the milking powers, and there are several pedigree herds kept largely for dairying purposes. The milch cows retain their flesh well and fatten into good beef after their fourth or fifth calf.

DEVON CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs.	mths.	days.	cwt. lb.	lb.
I. Steers not above 2 years...	77	1	10	7	10 109	1·82
II. Steers above 2 not above 3 years.	77	2	10	0	14 71	1·59
III. Heifers not above 3 years	37	2	8	24	12 75	1·42

(b) *Highest and Lowest Daily Increases.*

—	Average age.			Average live weight.	Average daily increase from birth (weight at birth disregarded).
	yrs.	mths.	days.	cwt. lb.	lb.
Class I. Young steers ...10 best...	1	10	4	12 62	2·09
...10 worst	1	11	7	10 28	1·62
" II. Old steers ... 9 best...	2	9	3	16 36	1·82
... 9 worst	2	10	12	13 13	1·40
" III. Heifers ... 5 best...	2	4	28	13 97	1·76
... 5 worst	2	9	29	10 104	1·18



DEVON BULL, "NORTHMOOR ROYAL."
Champion, Royal Agricultural Society's Show, 1909.



SUSSEX BULL, "PRINCE OF LOCK II."
Champion, Royal Agricultural Society's Show, 1911.



THE SOUTH DEVON.

The South Devon is a dual-purpose breed ; see p. 59.

THE SUSSEX.

The Sussex breed, reared on the Wealden clays and marshland of Sussex, Kent and Surrey, is purely a beef producer and is one of the largest and heaviest of British breeds. Sussex cattle are deep red in colour, and in addition to their size and weight, are remarkable for quality of beef, fineness of hide, hardiness and ability to thrive and do well under unfavourable conditions of food, soil and climate.

Value for Beef Production and Draught Purposes.—The bullocks were formerly used to a great extent for draught purposes on the heavy soils of their native and adjoining counties and for this purpose they were probably unequalled. A famous ox from Burton Park, Petworth, was recorded to be 16½ hands high, to have a girth behind the shoulders of 10 feet, and to weigh 287 stones 4 lb. With the decline of the practice of using oxen for draught purposes and particularly since the formation of the Herd Book in 1874, attention has been fixed solely on the development of the beef producing powers of the breed. As a result greater symmetry, depth of flesh, and early maturity have been secured, and the Sussex now stands in the front rank as a hardy beef producing animal.

Sussex cattle have been exported to America and South Africa, and have proved themselves to be especially adapted to the requirements of districts in the latter country where the mortality among stock is exceptionally severe. When the bulls are crossed with native cows the calves almost invariably have the red colour of the Sussex parent, a fact which greatly contributes to the popularity of the breed.

SUSSEX CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs. mths. days.	cwt. lb.	lb.
I. Steers not above 2 years...	98	1 10 12	12 92	2.11
II. Steers above 2, not above 3 years.	74	2 10 4	16 69	1.79
III. Heifers not above 3 years	51	2 9 11	14 79	1.62

(b) *Highest and Lowest Daily Increases.*

		Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs. mths. days.	cwt. lb.	lb.
Class I. Young steers	...12 best ...	1 10 0	14 28	2.39
	...12 worst	1 10 29	11 39	1.82
" II. Old steers	... 9 best ...	2 8 20	18 2	2.03
	... 9 worst	2 10 15	14 81	1.57
" III. Heifers	... 6 best ...	2 6 26	15 56	1.85
"	... 6 worst	2 10 15	13 51	1.44

THE GALLOWAY.

The origin of the Galloway is obscure, but it is undoubtedly a very old breed, and it is claimed that it has existed in a pure condition in its native district from the beginning of the seventeenth century. The home of the breed is the district in the South West of Scotland which still bears the old name of Galloway and includes the counties of Kirkcudbright and Wigtown, though herds are now kept in many other parts of the British Isles, notably in the North of England.

Characteristic features.—One of the most striking and distinctive features of Galloway cattle is their hardiness ; they will thrive and put on flesh on very poor grazing, and are admirably suited to cold, wet climatic conditions such as those of the parts of the country where they are chiefly bred. Galloways are hornless, and the recognised colour is black, with a brown tinge on the woolly winter undercoat, while a little white on the udder is tolerated. Dun specimens of excellent quality appear now and then in the best strains, and red of a somewhat foxy shade which was once a common Galloway colour still crops up though very rarely. A white-belted variety occurs in the North of England. The head is short and broad, the eye large and prominent, the body rounded and symmetrical, and the legs are short and clean. The skin should be moderately thick, but mellow, and the hair soft and wavy with a mossy undercoat ; wiry or curly hair is very objectionable. Though they are naturally slow in development under ordinary treatment, Galloways bear heavy feeding quite well, and from time to time the breed has held foremost positions in contests against other breeds at the Smithfield Show.

The breed belongs essentially to the class of beef-producers, and the beef is of the finest marbled quality. As the cows generally suckle their calves, few heavy milkers have been noticed.

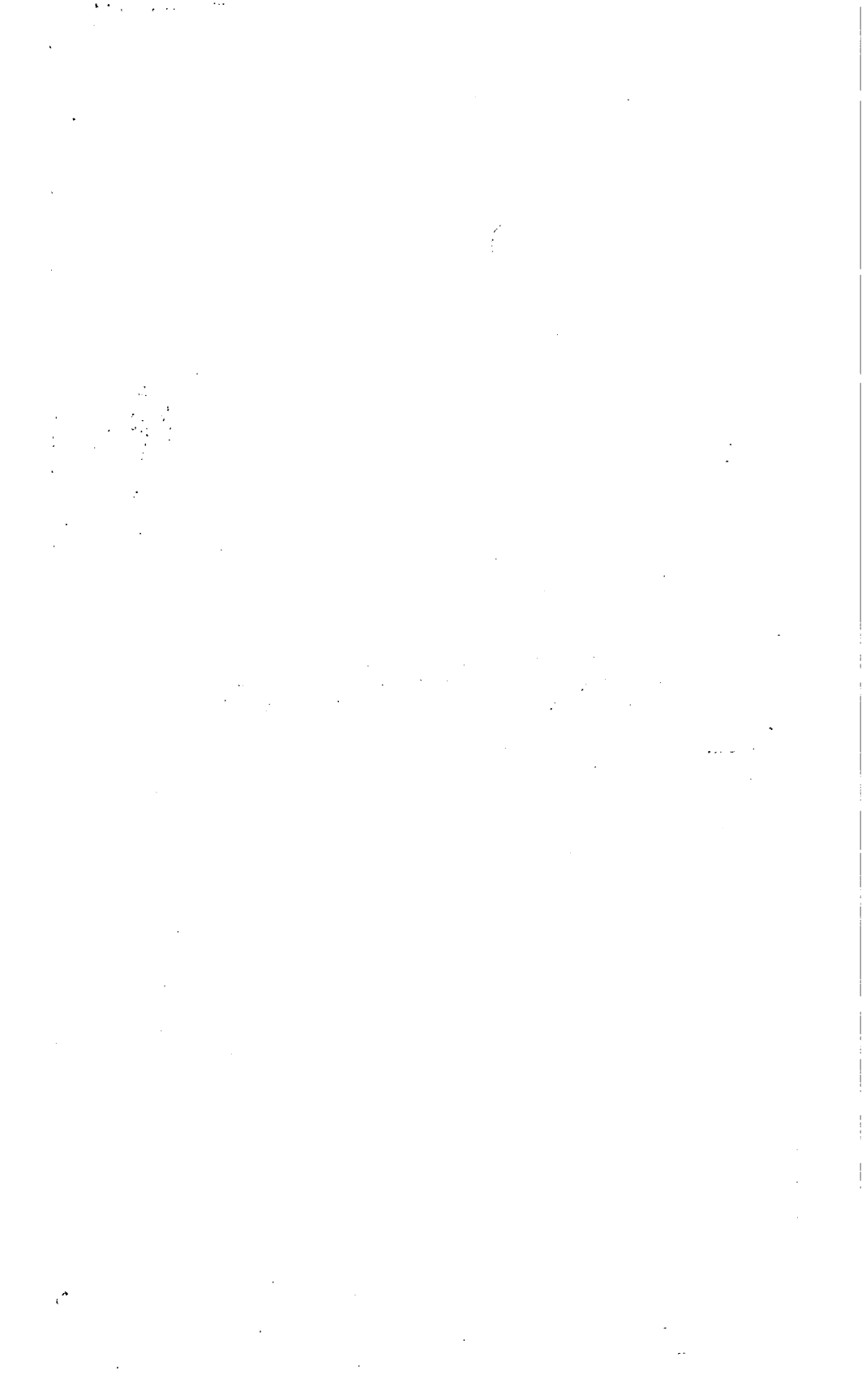
Value for Crossing.—Galloways are highly valued for crossing purposes, with a view to the production of beef animals ; the calves produced are almost invariably hornless, and if the other breed is dark roan or red in colour, the majority of the crosses are black. When crossed with white or light-roan Shorthorns, the majority of the offspring are polled blue-greys, and these crosses have such a



GALLOWAY BULL, "MARCHFIELD DESPISED."
Champion, Highland and Agricultural Society's Show, 1910.
Champion, Royal Agricultural Society's Show, 1911.



WEST HIGHLAND BULL, "CALUM BUIDHE OF ATHOLL."
First Prize, Highland and Agricultural Society's Shows, 1899, 1900 and 1901.



great reputation as grazing and fattening animals that for crossing with Galloway cows white Shorthorn bulls are used almost exclusively. Blue-greys are bred by crossing either way. The champion at Norwich, Birmingham, and Smithfield fat-stock shows in 1897 was a blue-grey out of a white Shorthorn cow by a Galloway bull.

Sustainability for Foreign Countries.—The establishment of a separate Galloway Herd Book in 1877 gave an impetus to improvement, and Galloway cattle have secured, in Canada and the Western States of North America, a reputation as range cattle which will doubtless result in their spreading to the colder regions of other countries when their ability to resist exposure and to produce a first-class carcase under adverse conditions is more widely known. Within the last few years Galloways have been tested at the Live Stock Experiment Station in Alaska and have been found to be eminently suited to the hilly country surrounding the Station.

GALLOWAY CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs. mths. days.	cwt. lb.	lb.
I. Steers not above 2 years ...	50	1 10 3	10 104	1·82
II. Steers above 2, not above 3 years.	53	2 10 0	14 62	1·58
III. Heifers not above 3 years	42	2 9 27	12 24	1·33

(b) *Highest and Lowest Daily Increases.*

—	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
	yrs. mths. days.	cwt. lb.	lb.
Class I. Young steers ... 6 best ...	1 8 27	11 73	2·06
... 6 worst	1 10 20	9 106	1·62
„ II. Old steers ... 7 best ...	2 9 23	16 35	1·78
... 7 worst	2 10 19	13 7	1·39
„ III. Heifers ... 5 best ...	2 8 7	13 52	1·54
... 5 worst	2 10 8	10 102	1·17

THE WEST HIGHLAND.

Origin.—The West Highland or Kyloe, native to the Islands and Highlands of Scotland, is the shaggiest and hardiest of all British breeds. Some authorities take it to be an almost pure descendant of the Old Celtic breed, others regard the great

variations in colour as evidence that its ancestry is very mixed ; in any case it has certainly existed practically unchanged for a great length of time in its native districts.

General Appearance of the Breed.—It would be difficult to improve on the description of the breed given by the late John Robertson, factor to the Duke of Atholl, under whose management the Atholl herd, one of the oldest and best in the country, was for many years. He said :—"There are few animals familiarly known to us so graceful in form, colour and movement, as a thoroughly well-bred Highland ox or heifer. In form it possesses all the characteristics so much and so justly prized in the Shorthorn, the straight back, the short legs, the broad chest, the breadth of loin and depth of rib, and, in short, the squareness and solidity of form which always imply weight, whether in man or beast, while the noble expanding horns and fine, full and fearless eye, the exceptionally short face, the broad well-bred muzzle, the shaggy coat of straight and wavy but not curly hair of richest black, or red, or dun of many shades, or brindled colour, impart a picturesqueness which is still further enhanced by that grace and deliberation in movement so distinctive of all animals reared in perfect freedom." Until recent years the general colour of the breed was black, occasionally with white markings, but it is safe to say that now the majority of the cattle are various shades of red and yellow, with a good proportion brindled and some dun. The horns are a striking feature in Highland cattle ; in bulls they should be strong and "come level out of the head, inclining slightly forwards and also rising slightly towards the points. In cows the horns ought to come squarely out of the head, and rise more quickly than in bulls. They should be long, and on both male and female they should be highly vascular and pink for some distance outwards from the roots, and have a rich 'sappy' appearance to the tips." The hardiness of the breed makes the animals independent of house accommodation during winter, and they can live and thrive on very inferior food.

Improvement of the Breed.—The breed can boast of no Bakewell and there has been no in-and-in breeding practised ; the great improvement wrought upon the numerous originally hard and unprofitable varieties of Highland cattle in the country many years ago has been effected by selection, and is largely due to the efforts of the Highland Cattle Society—founded 1884. All attempts to improve the West Highland by the introduction of alien blood have failed, and it is difficult to see how such could be beneficial. The severity of the climate and the extreme poorness of the food in its native districts, preclude early maturity and great size, and blending with other breeds could only result in loss of hardiness without increasing the symmetry of form and quality of beef, in which respects the breed is unsurpassed.

Value for Beef Production.—West Highland beef is of the very first quality, and, for grazing animals, the crosses with the Shorthorn and with bulls of other early-maturity beef-breeds are in every way successful. A good deal of the hardiness of the breed is transmitted to the crosses, though naturally they are not suited for the

extreme conditions to which the pure cattle are subjected. The yield of milk, though generally small, is sufficient for the suckling of a single calf by each cow.

WEST HIGHLAND CLASSES AT THE SMITHFIELD SHOW,
1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
I. Steers not above 3 years ...	63	yrs. mths. days. 2 8 25	cwt. lb. 13 30	lb. 1'49
II. Steers above 3 years ...	79	3 9 22	15 106	1'28
III. Heifers not above 4 years	53	3 7 10	13 11	1'11

(b) *Highest and Lowest Daily Increases.*

	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
—			
Class I. Steers not above 3 years...8 best	yrs. mths. days. 2 7 5	cwt. lb. 14 49	lb. 1·71
" " " " ...8 worst	2 10 3	11 74	1·26
" II. Steers above 3 years 10 best	3 7 22	17 29	1·45
" " " " 10 worst	4 1 0	15 11	1·13
" III. Heifers ... ..7 best	3 2 17	13 82	1·31
"7 worst	3 9 19	11 90	0·95

THE RED POLL.

Origin.—The Red Poll of Norfolk and Suffolk is a dual-purpose breed formed about 100 years ago by blending two breeds—the Old Red Norfolk Horned and the Polled Suffolk Duns—of very different type and character. The latter was a milking breed of conspicuous merit and generally dun in colour, though it is on record that the best milkers were “red brindled or yellowish cream-coloured.” The Norfolk Horned Breed had a great reputation as an early-maturity grazing breed, of refined form and small size, and produced some of the best beef sold in the London market; the colour was blood-red, with a white or mottled face suggesting some original connection with the Hereford breed.

Improvement of the Breed.—Early last century John Reeves, a farmer on Holkham Estate, and Richard England, of Binham, set about blending the two very different breeds to form a "new kind" of general-purpose animal. George, of Eaton, near Norwich, began about the same time to collect a herd of blood-red Polled Suffolks. Interchange of cattle of the improved type went on

between the two counties of Norfolk and Suffolk; and, at the Royal Agricultural Society's Show in London in 1862 the breed was first publicly recognised as the "Norfolk and Suffolk Red Polled"; twenty years later the name was shortened to "Red Polled," which in 1909 was further abbreviated to "Red Poll."

The breed has been immensely indebted to the *Herd Book*, compiled by Henry F. Euren and the Rev. George Gilbert, the first volume of which appeared in 1874. A special feature is the system of "group letters and numbers which tell at a glance from what foundation cow of a certain herd or district every animal in the *Herd Book* has descended on the dam's side."

Appearance.—The characteristic colour is deep blood red, though the tip of the tail and the udder of the cow may be white. Any extension of white in front of the udder is objected to, and in the case of the bull the only white part should be that on the tip of the tail. The presence of horns or scurs is deemed a disqualification. The nose should be a clear white; cloudiness or darkness is regarded with disfavour and a black or blue nose disqualifies the animal.

Milk Records.—The Red Polled Society of Great Britain and Ireland was formed in 1888. Its regulations, formulated in 1899, recognise the dual-purpose qualities of the breed, and provide for the keeping of complete milk-records of all the cows in a herd and for the judging of both milking quality and general appearance.

The milk records of different herds are published in the *Herd Book*, and the following table summarises the results of the past five years, January 1, 1907, to December 31, 1911. In taking the averages all cows have been included with regard to which complete information is available, and except that incomplete periods of less than 210 days have been omitted, no allowance has been made for abnormally short or long periods of lactation. The number of such is not, however, sufficient to seriously affect the average, which may be taken to apply to normal cows calving at about the same time each year.

Milk Records, 1907-1911.

Number of calves which the cow has produced up to end of year.	Average number of days in milk during the year.	Average weight of milk produced per annum—lb.	Number of cows from which the averages are taken.
1	322	6,093	43
2	310	6,266	108
3	308	6,497	102
4	315	7,003	86
5	305	7,114	60
6	295	6,973	44
7	307	7,373	28
8 and more.	315	7,266	102

Beef Production.—Steers put up to finish at about two years old, when they have stopped rapid growth, fatten quickly, and their carcasses command satisfactory prices in the London market. The merits of Red Polls as medium-sized dual-purpose cattle, and particularly their reliability as milk producers have led to their being exported in considerable numbers to practically all the Colonies and



RED POLL COW, "CHEDDA."
Champion, Royal Agricultural Society's Show, 1911.



SOUTH DEVON COW, "COUNTRESS."
First Prize, Royal Agricultural Society's Show, 1910 and 1911.

to many foreign countries. In the United States they appear to be the most popular of the purely dual-purpose cattle and are rapidly increasing in numbers. They seem to be particularly successful in semi-tropical countries, owing largely to the protection against sun afforded by their deep red coats, though they also endure severe climates quite well.

Considerable improvement in quality and uniformity has been effected in recent years, and Red Polls are steadily growing in popular favour.

RED POLL CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs. mths. days.	cwt. lb.	lb.
I. Steers not above 2 years ...	36	1 9 26	11 64	1·95
II. Steers above 2, not above 3 years.	28	2 8 19	14 91	1·67
III. Heifers not above 3 years	34	2 7 15	13 15	1·54

(b) *Highest and Lowest Daily Increases.*

—	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
	yrs. mths. days.	cwt. lb.	lb.
Class I. Young steers ... 5 best ...	1 10 11	13 53	2·22
... 5 worst	1 10 6	10 41	1·72
II. Old steers ... 4 best ...	2 6 18	15 56	1·85
... 4 worst	2 7 16	12 60	1·46
III. Heifers ... 4 best ...	2 3 6	14 46	1·95
... 4 worst	2 10 15	11 91	1·26

THE SOUTH DEVON.

The South Devon differs so much from the Devon that it ranks as a distinct breed, and its interests are protected by a separate Herd Book Society, although some of their ancestors were common to both. South Devons are considerably larger than Devons and the colour is a lighter shade of red.

Origin.—The greater milking powers, together with the differences stated, are believed to have been acquired many years ago by crossing with Channel Islands bulls, although no definite evidence of the assumption exists. Youatt in 1834 refers to the practice of crossing the English South Coast and Isle of Wight cows with Alderneys (the early generic name for Channel Islands cattle), although a South Devon breed existed before that time under the name of South Hams.

Value both for Beef and Milk.—Within the last 30 years the South Devon has obtained a well deserved recognition as a general-purpose animal. The breed has spread to the surrounding counties, and there is a growing demand for animals for shipment to South Africa, South America, and the United States. Cows of 900 and 1,000 gallons yield of milk per annum exist in the best herds, and the milk is of slightly higher quality than that of average dual-purpose cattle. There is no official scheme for the keeping of Milk Records, but the performances of the breed at the London Dairy Show are mentioned at the end of this section, p. 71.

SOUTH DEVON CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Age, Live Weight, and Daily Increase.*

—	Total number in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs. mths. days.	cwt. lb.	lb.
Steers not above 3 years ...	31	2 5 15	16 16	2·02

(b) *Highest and Lowest Daily Increases.*

—	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
	yrs. mths. days.	cwt. lb.	lb.
Steers ... 4 best ...	2 1 28	16 19	2·30
" ... 4 worst	2 8 28	15 83	1·76

THE WELSH BLACK.

Opinions differ as to the exact origin of Welsh cattle, but most authorities agree that the breed is extremely old and that, in all probability, it resembles more closely than any other, the cattle existing in Britain in pre-Roman times.

Until about a hundred years ago, Wales could boast the possession of several quite distinct breeds of cattle but gradually all except two types disappeared or were absorbed. These two varieties, the North Wales or Anglesey, and the South Wales or Pembroke or Castle Martin, remained distinct with separate Herd Books until 1904 when the Welsh Black Cattle Society was formed with one Herd Book for the whole breed. It will necessarily take some time to fuse the two types, so it may be remarked that the cattle of the northern branch are specially famed as graziers' and butchers' cattle while in the South Wales cattle, milking properties are more strongly developed. The breed as a whole is noted for great hardiness of constitution, quality of flesh and value for general purposes. The



WELSH BLACK BULL, "WERN EMPEROR."
First Prize, Royal Agricultural Society's and Welsh National Society's Shows, 1909.



LONGHORN BULL, "EASTWELL EAGLE."
First Prize, Royal Agricultural Society's Show, 1911.

cattle are not usually regarded as quickly maturing but their records at Smithfield compare favourably with those of other breeds, and their reputation as graziers' cattle is shown by the extensive and regular flow of store cattle from Wales to the rich grazing lands of the Midlands where the Welsh "Runts" have for generations been held in high esteem. The cattle are on the whole somewhat lacking in symmetry but are improving in this respect; they "kill" well, yielding a higher percentage of carcase than might be expected from their appearance, and the beef is of first class quality. Generally speaking, the cows are good milkers and the milk is of about average composition.

Welsh Black cattle have been much improved by selection within the last quarter of a century, but their constitutional vigour has not been impaired by excessive in-and-in breeding as in the case of some other breeds. Their hardiness and other good qualities single them out as belonging to a type of general purpose animal that would suit the pioneer settler in a new country, for the oxen were for generations as noted in the yoke as the cow was at the milk-pail and the "runt" as a producer of prime beef. At one period Welsh oxen were in such great demand for draught purposes that they were specially bred with this in view, and it has been suggested that this accounts for two of the most common defects of the breed not yet quite eradicated—the heavy shoulder, and the tendency to light hindquarters.

The breed has been tried with success in America and a few animals have been exported to South Africa, where their hardiness of constitution has enabled them to resist conditions unfavourable to other breeds.

General Appearance.—The colour is black, though a little white on the udder or in front of the scrotum is allowed. The presence of much white is regarded with disfavour, as being an indication of Shorthorn blood. As in the case of other black breeds, the winter coat has usually a dull brown tinge, particularly in young animals. There is a good deal of variation in different animals as regards horn. In all, the horns are strong and well developed—naturally more so in the bulls than in the cows. Some show the long drooping incurved character of many Longhorns but more commonly they are similar to those of typical Herefords, Sussex or Devons.

WELSH CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weights, and Daily Increases.*

Class.	Total number in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		yrs. mths. days.	cwt. lb.	lb.
I. Steers not above 2 years ...	81	1 11 7	12 95	2·04
II. Steers above 2, not above 3 years.	125	2 10 14	15 71	1·67
III. Heifers not above 3 years	69	2 8 8	13 8	1·49

(b) *Highest and Lowest Daily Increases.*

—			Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
			yrs. mths. days.	cwt. lb.	lb.
Class I.	Young steers...	10 best ...	1 11 18	14 95	2.32
	" "	" ...10 worst	1 11 8	10 78	1.69
" II.	Old steers	" ...16 best ...	2 9 20	17 86	1.94
	" "	" ...16 worst	2 11 1	13 32	1.40
" III.	Heifers	" ... 9 best ...	2 3 27	14 0	1.85
	"	" ... 9 worst	2 10 7	11 27	1.21

THE LONGHORN.

Origin.—The Longhorn breed of cattle belonged originally to the West of England, as far south as the Severn, and extending eastwards through the Midlands to Leicestershire. Until supplanted by the Shorthorn, it was the prevailing breed of Ireland, where it can be traced back for over 200 years, and where the animals were noted for "great development of form and size." Lancashire and the Craven district of Yorkshire have been generally associated with the breed, but Leicestershire shares the distinction, as Robert Bakewell, of Dishley, who began his operations about 1750, was its most noted improver. The original animal was large (though differing in size in different districts according to the fertility of the soil), coarse-boned, lean-fleshed, but slow in coming to maturity, with the hide thick, though soft and mossy to the touch. For work on the farm, Longhorn bullocks were highly esteemed; and the cows were good at the pail, but more noted for richness than abundance of milk. Bakewell's efforts in selection and in-and-in breeding, extending over 45 years, resulted in the production of smaller, more symmetrical, and more refined animals, but at the expense of some of the constitutional vigour and power of milk production. Bakewell did not communicate his methods to anyone, and the secret of his success died with him.

Present Position of the Breed.—In competition with the Shorthorn for public favour the Longhorn was seriously worsted; and, during the early part of the latter half of the 19th century, the breed was so reduced in numbers as to be threatened with extinction. This danger has passed away, as the herds belonging to the members of the Longhorn Cattle Society now number 23, and there are over 500 registered Longhorn cattle in the country, the majority being in the Midlands with Warwickshire as chief centre. The breed has been developed and brought into line with modern requirements in the matter of tendency to early maturity, while the hardiness of constitution and power to live and thrive on coarse food have been retained. The colour of the flesh has been improved, and it now ranks with that of other breeds. The latent milking powers are again developing, and in many of the herds deep milking strains have been built up.

Appearance.—The colour now in favour is a dark brindle with a bluish tint, showing, when the animal is at its best in full coat, “a bloom like that of a ripe grape.” There is a white line along the back, and along with this a white patch on the thigh is appreciated. Apart from the length, set and shape of the horns, the presence of black hair in the Longhorn coat is a striking difference between the Longhorn and Shorthorn breeds.

THE AYRSHIRE.*

Origin of the Breed.—The Ayrshire breed as such originated in the northern division of the county from which it takes its name. There is clear evidence of very similar cattle being there in fair numbers about the middle of the 18th century, but it is unlikely that the breed was really native to the district, and it is highly probable that the breed is more or less directly descended from imported cattle, probably of the Dutch and “Teeswater” and —though to a much less extent—Channel Islands breeds. Apart from historical evidence, which makes it certain that no cattle at all similar to Ayrshires were known in the South West of Scotland 300 years ago, the great dissimilarity between this and the other Scotch breeds is difficult to account for on any other hypothesis. From its original district the breed spread, until it has, except in a few districts, replaced the Galloway in the South West of Scotland, and it is now one of the best known dairying breeds in all parts of the world.

The Ayrshire Cattle Herd Book was founded in 1877, but so far back as 1814 premiums for Ayrshires were awarded by the Highland and Agricultural Society of Scotland.

In 1884, a Scale of Points for Ayrshire Cows was drawn up by the Herd Book Society; in some ways this appears to have done harm as it led to too much attention being paid to appearance and fancy points and too little to milking qualities. One of the most serious defects of the breed, thus encouraged, was the small size of the teats. This, however, has been much improved in recent years and in 1906 another scale of points fixed the length of teat at from $2\frac{1}{2}$ to $3\frac{1}{2}$ inches as against 2 to $2\frac{1}{2}$ inches in the previous scale.

Distinctive Characteristics of the Breed.—The scale of points referred to above, describes the colour as “red of any shade, brown or white, or a mixture of these, each colour being distinctly defined. Brindle, and black and white are not in favour”; black and white is, however, quite common. Perhaps of all colours the most popular is a white, or almost wholly white, body with brown or red patches in the neighbourhood of the head. Roan of any kind is not an Ayrshire colour. In the 1906 scale of points, the average weight of mature cows in full milk is given as from 800 to 1000 lbs. Pure Ayrshire bullocks are seldom reared and fattened, but they are said to make fair butchers’ beasts if fed off young.

The Ayrshire crosses well with the Shorthorn or the Galloway giving fairly useful beef cattle; the Galloway cross is naturally the

* See *The Origin and Early History of the Ayrshire Breed of Cattle* by John Speir. Kilmarnock—Standard Printing Works, 1909.

slower of the two in maturing, but is hardier. Compared with the Jersey or other dairy breeds, the head of the Ayrshire is deeper in the jaw and broader between the eyes. The horns are set on widely and incline upwards.

The udder is quite distinctive. Unlike those of the Shorthorn and Jersey, which are to a certain extent pendulous, the udder of the Ayrshire is firmly attached to the body, with an almost flat and level sole extending well forward, with teats set on quite perpendicularly.

Distribution of the Breed.—Ayrshire cattle have been exported in great numbers to Sweden, Denmark, the United States, Canada, Australia, New Zealand and South Africa. Herds have been established with success in countries so different as Finland and India, and when its hardiness is considered there seems every chance of its at least maintaining its position as one of the leading dairy breeds of the world.

Milk Production and Records.—The Ayrshire shares with the Kerry the credit of being able to yield a greater return of dairy produce on poor land and inferior food, than any other breed. The milk is of about average quality and, owing to the small size of the fat globules, is particularly well suited for cheese-making.

In 1903, through the efforts of the late Mr. J. Speir, the Highland Society took up the question of milk records and continued to carry on the work in connection with them until 1907 when it was handed over to the Ayrshire Cattle Milk Records Committee, now designated The Scottish Milk Records Committee. It would be difficult to exaggerate the value of this work; even up to the present the direct gain to breeders in obtaining increased milk production from their herds and greater prices for their breeding stock must have been enormous.

Under the scheme supervised by the Milk Records Committee the actual weighing, testing, and recording is done by experts who are continuously employed and who travel from one farm to another staying a day, in some cases two, at each farm. Generally speaking each herd is tested every three or four weeks, but as the system develops it will, no doubt, be found possible to arrange for more frequent tests. The scheme is not confined to registered animals but probably about 75 per cent. of the cows tested are such.

The results have been published in slightly different forms in different years. Up to 1910 the recorded yields of each cow tested was published, along with information as to age and period of lactation, in the Annual Report of the Committee. In 1910 and 1911 only yields are reported which were obtained in single lactations terminating or approaching termination in the year and lasting not longer than 52 weeks. The yields are classified as follows: cows giving not less than 2,500 gallons and heifers giving not less than 2,000 gallons of milk calculated as containing one per cent. of fat are classed as "good." If $3\frac{1}{2}$ per cent. of fat be assumed as the average content, these figures correspond to actual yields of 714 gallons and 570 gallons respectively.

Cows giving less than two-thirds of these amounts are classed as "bad."



AYRSHIRE COW, "DEWDROP I. OF OLD GRAITNEY."
First Prize, Royal Agricultural Society's Show, 1911.



JERSEY COW, "TWYLISH XI."
Winner of Gold Medal for Butter Test, Royal Counties Show, 1912.

In 1910, of 9,514 cows and heifers whose yields are recorded, 2,347 animals gave yields considered "good," 607 animals gave yields considered "bad." In 1911, of 13,965 recorded yields, 4,074 are classed as "good," 568 as "bad."

THE JERSEY.

The Jersey, which is claimed to be one of the oldest and purest breeds is more numerous represented than the cattle from the other Channel Islands. The Island of Jersey itself, with its genial southern exposure, has a stock varying in number between 11,000 and 13,000 and there is probably a similar number at the present time in Britain. It is believed that both the Jersey and the Guernsey breeds, which were formerly classified under the generic name of Alderney, are of French origin. The outstanding superiority of Jerseys as dairy cattle dates back for nearly 200 years, and the introduction of foreign blood has been prohibited since 1763 by various "Acts of the States of Jersey," to maintain purity and give protection against disease. Tuberculosis is practically unknown among Island-bred cattle.

Colour and General Appearance.—In breeding Jersey Cattle, such supreme importance is now attached to dairy qualities that little attention is paid to colour, and great variation in this respect is found. Some years ago "silver greys" became the fashion in England, and to this was due the increase in the number of whole or self-coloured cattle. This movement has, however, happily died away. The prevailing colours are various shades of fawn, brown and grey and even black and white. Perhaps the most constant feature of the colouring is the presence of a light grey ring round the muzzle which distinguishes the Jersey from the other Channel Islands cattle.

At one time the Jersey was described as "an ugly ill formed animal, with flat sides, wide between the ribs and hips, cat hammed, with narrow and high hips and a hollow back," though the same writer admitted she had "the head of a fawn, a soft eye, an elegant crumpled horn, small ears yellow within, a clean neck and throat, fine bones, a fine tail, and above all a well-formed capacious udder, with large swelling milk veins."

At the present time the Jersey is a "wedge shaped" beautifully formed, and graceful animal.

Improvement of the Breed and System of Registration in the Island.—Colonel le Couteur and Colonel le Cornu have the first claim to credit for the improvement in the form of the animal. The former was Secretary of the Royal Jersey Agricultural and Horticultural Society in 1834, when a scale of points dealing almost entirely with the external appearance of the animal was drawn up. In 1866, the Herd Book for the Island was established, and to the stringent regulation governing registration of animals a great deal of the subsequent improvement and fame of the breed is due. Purity of blood is not sufficient for registration—for, in fact, all the cattle in the Island can be regarded as pure-bred. Animals, whether the offspring of registered parents or not, must be submitted to judges

for inspection and approved by them before entry in the Herd Book can be made. No heifer is examined until she has produced a calf, and on the male side the merits of the bull's dam are taken into account. Cattle which are not the progeny of registered parents but which are of sufficiently high merit can be entered as "foundation stock"; those which are the offspring of registered parents appearing under the heading of "Pedigree Stock." "Highly Commended" (H.C.), "Commended" (C.), are the qualifications appended to the letters P.S. or F.S. ("Pedigree Stock" or "Foundation Stock") which follow the number given to each animal, so that a purchaser of a registered Jersey from the Island always obtains the Herd Book Judges' opinions of the value of the animal he is buying. On more than one occasion, the Gold Medal in the Butter Test has been awarded to a "foundation stock" cow.

Demand for Jersey Cattle Abroad.—About 1853 a great demand for Jerseys sprang up in the United States, and, to retain good animals to breed from for a time, prizes gained by bulls were forfeited if the animals were not kept on the Island for a year. Another American boom in 1882 was responsible for the taking away of many meritorious cows from the Island at prices ranging between £100 and £1,000. The highest priced bull was Wolseley, sold for £200. During the past few years the demand for Jerseys with butter test records, in America and Australia has again been much in evidence and higher prices than ever have been obtained. Many surplus cattle have been sold to Denmark at commercial prices but the bulk of these were not registered in the Herd Books; France also takes fair numbers.

The English Jersey Cattle Society.—The English Jersey Cattle Society (1878) issued the first Volume of its Herd Book in 1879. It instituted butter test classes at shows in 1886, an example which has been widely followed in other countries. At home the annual contests among all dairy breeds, as at Tring, at the Royal Agricultural, Bath and West, Royal Counties, and British Dairy Farmers Shows, are valuable results of the movement. These tests have done a great deal to stimulate the demand for the breed, as they have demonstrated its valuable dairy qualities and have proved what is now universally recognised, that no breed gives milk so rich or so suitable for making the highest quality of butter.

A good idea of the average economic qualities of the breed will be obtained from the milk yields given below, and from the results of tests at the London Dairy Show set forth in the table at the end of this section, p. 71. As showing what is possible with the best animals the following results taken from a single herd are given.

Year.				Total number of cows in the herd throughout the year.	Average weight of butter produced per cow.
					lb.
1906	...	...	...	24	437.50
1907	...	...	...	24	424.22
1908	...	...	...	24	418.68
1909	...	...	...	20	408.14
1910	...	...	...	11	459.78

This is the more remarkable when it is remembered that all cows in the herd are included in the yearly records, and that all animals six days after the birth of their first calf, whether the calf is normal or premature, are reckoned as cows in the herd, whether dry or in milk.

The breed being a typical dairy one, the animals do not excel as butchers' beasts. Bull calves not required for breeding purposes are usually killed while quite young, though a few may be kept and fattened. The fat is usually too yellow, but the flavour and the texture of the flesh are said to be good.

Many breeders of Jersey cattle keep milk records, (some have done so for over 25 years), and the number of such is rapidly increasing. The following table gives a summary of the records extracted from the English Jersey Herd Book, 1906-1910. In taking the averages, all cows have been included with regard to which the information given is complete, and though, owing to the diversity of form in which the results are stated, a considerable proportion, including some of the most famous herds in the country, have had to be omitted, the figures may be taken as fairly representative. In addition to those sending particulars of results for publication many owners keep private records, but the summary is taken from official published figures only.

Number of calves which the cow has had up to the end of the year.	Average number of days in milk in the year.	Average weight of milk produced—lb.	Number of cows from which the averages are taken.
1	320	5,125	14
2	302	5,404	43
3	311	5,946	54
4	313	6,638	42
5	317	7,088	24
6	312	6,786	25
7	300	6,814	14
8 and more	311	6,993	20

THE GUERNSEY

The Guernsey, an offshoot of the Normandy breed, is a larger, stronger-boned and more robust breed than the Jersey, and is capable of yielding beef of excellent quality though the fat is yellow in colour. The breed includes the cattle of Guernsey, Alderney, Sark and Herm, and as these islands are generally more exposed than Jersey the hardiness of their animals has been proportionately influenced. As in Jersey, the importation of live cattle (except for immediate slaughter) from other areas is forbidden. Until recent years Alderney bred animals were generally smaller than those of Guernsey but this difference has largely been effaced by the interchange of both bulls and cows.

Colour and General Appearance.—Broken colouring is characteristic of this breed, and white patches appear on the predominating light yellow, brown, or reddish-fawn; black with white markings, and brindle may occasionally be found. The grey of the Jersey's

head is absent. Black or dark muzzles often occur and amber coloured horns and hoofs and deep yellow skin in the ears and on the udder and body generally are characteristic.

Butter and Milk Production.—Guernsey butter is deeper in colour than Jersey butter. This has raised the breed in the estimation of dairy farmers in this country, who often include one or two Guernsey cows in their herds of Shorthorns or Ayrshires to impart a richer appearance to both milk and butter. An ordinary yield of butter from cows kept in a natural way, is 10 to 12 lb. a week.

Hardiness.—The hardiness of the breed has been well demonstrated by a breeder as far north as Midlothian, who has kept a herd for over 19 years. After the first winter, the heifer calves run in the fields with merely an open shelter-shed to retire to at will until they come into profit at two years and three months old. The average annual milk yield of the herd is 700 to 750 gallons a cow.

Herd Books.—There are between six and seven thousand cattle in the Island of Guernsey, about half being cows and heifers in milk and in calf. Over 1,000 heifer calves and 200 bull calves are registered annually in the Herd Book of the Royal Guernsey Agricultural and Horticultural Society. Guernseys bred in England are registered by the English Guernsey Cattle Society.

Until lately no official list of milk records has been kept but in August, 1911, a scheme was brought into operation by the Royal Guernsey Agricultural and Horticultural Society and at the beginning of 1912 a scheme supervised by the English Guernsey Cattle Society was started; in future records will appear in the two Herd Books. Results of tests at the London Dairy Show appear at the end of this section, p. 71.

THE BRITISH HOLSTEIN.

References have already been made to the fact that many of our breeds of cattle are indebted to importations of Dutch stock, made particularly in the seventeenth and eighteenth centuries, which to varying extents modified the native cattle. In addition to these, large numbers of Dutch cows were imported in the nineteenth century and kept by dairymen and dairy farmers particularly in the south eastern and eastern counties, and in the districts around Edinburgh and Aberdeen. With the passing of the Act prohibiting the importation of live cattle, except for purposes of immediate slaughter, further introduction was stopped, but a sufficient number of the breed remained to preserve it from extinction, and in 1909 the British Holstein Cattle Society was formed with the object of developing the breed and of looking after its interests. British Holstein cattle are similar to the Holstein-Friesians of America and like them are mainly descended from the black-and-white Friesian cattle of the Netherlands, though some slight admixture with other breeds of Dutch cattle—especially those to be found nearest the coast, and in the neighbourhood of Rotterdam and Amsterdam—has taken place.

General appearance.—British Holstein Cattle are large in frame, almost as large as average Shorthorns, and show true milking type, though they have more of the characters of dual purpose cattle



GUERNSEY COW, "FI-FI."
First Prize, Royal Agricultural Society's Show, 1907.



BRITISH HOLSTEIN COW, "MELFORD EVA."
First Prize, Royal Agricultural Society's Show, 1911.



than have Jerseys or Ayrshires. The four recognised colours are dun, dun-and-white, black, and black-and-white, the latter predominating and being most favoured. The colours are very sharply defined, each being in distinct patches. The head is long—even for a dairy breed—and fine, with well bent horns of a fine shorthorn type inclining forward, and keeping fairly level with the poll. The neck is slim rather than fleshy, and fairly long. Compared with other dairy breeds the chest is deep and thick through the heart, with comparatively thick withers and shoulders. The coupling is long and the belly low and exceptionally capacious.

Characteristics of the Breed.—The outstanding characteristic of the breed, as of its close relations in Holland and America, is the extent to which the milk-producing powers have been developed. Probably in this respect it is unequalled by any other breed. The milk is not of such high quality as that of other dairy breeds, but this is a point in which improvement can be effected by careful and systematic selection. It is claimed that the fat globules are unusually small, making the milk particularly suited for cheese making. The breed is hardy and extremely adaptable, as is evidenced by the fact that it is highly valued in countries so different as North Russia and semi-tropical South Africa. Some strains may be regarded as dual-purpose cattle, but in this country it is being developed as a dairy breed.

The first volume of the Herd Book, just issued (1912), contains 3,000 entries, and the Society numbers over 220 members representing all parts of the United Kingdom.

In the absence of official records, the following meritorious performances notified to the British Holstein Society may be mentioned.

In three herds, numbering about 60 each, the following average yields per cow were obtained in 1910 :—

- I. 1,050 gallons (from cows alone).
- II. 896 " (from whole herd, including heifers).
- III. 815 " " " " "

Individual yields in 1911 and 1912 are 1,706 gallons in 47 weeks and 1,314 gallons in 31 weeks. A celebrated cow, "Grace," in seven years and ten months bred seven calves and gave 11,300 gallons of milk.

THE KERRY AND THE DEXTER.

The Kerry is the only remaining pure breed of cattle of ancient Irish origin out of several distinct sorts which remained till a comparatively recent date.

General Appearance of the Kerry.—The following description of the Kerry, written in 1872, is true of the breed to-day:—"The true Kerry is a light, neat, active animal, with fine and rather long limbs, narrow rump, fine small head, lively projecting eyes, full of fire and animation, with a fine waxy yellow cocked horn, tipped with black." The colour is black, though a small patch of white on the udder of the cow is permissible and common. Red cattle are not now admitted to the Herd Book.

Value for Milk Production.—In general outline the Kerry cow conforms to the true milking type. She possesses a well-shaped and capacious udder and is a milk producer of no common order, apart from her capacity to live and do better than animals of most of the other breeds on inferior food. In the records of the London Dairy Show it may be seen that in one year eight Kerries averaged daily 36 lb. of milk yielding $3\frac{1}{2}$ per cent. of butter fat; in another year, twelve gave $25\frac{1}{2}$ lb. of milk, with $4\frac{1}{2}$ per cent. of fat; and a third lot gave $33\frac{1}{2}$ lb. of milk and 3.69 per cent. of fat. The general average of milk throughout has been over 3 gallons daily, while in three different years the milk of 32 cows yielded $4\frac{1}{2}$ per cent. of fat. A Kerry cow in breeding form should not weigh more than 900 lb.; a bull not more than 1,000 lb. live weight.

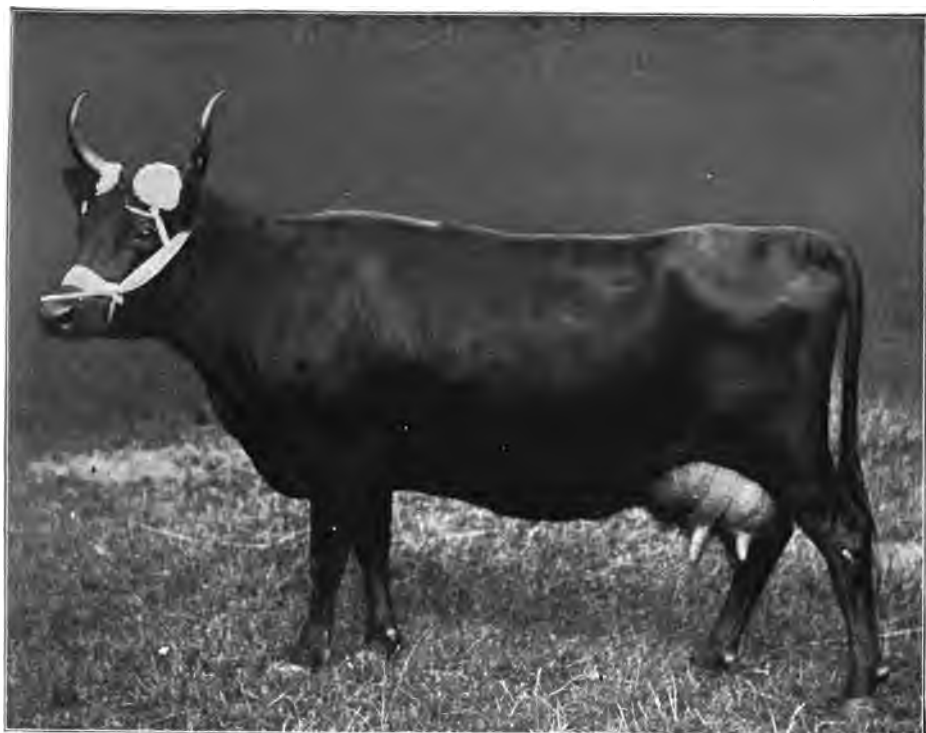
Dexter Cattle.—Dexters are either whole-black or whole-red; much more compact, substantial, lower and more squarely set animals than the Kerry. The leg bones are much shorter and stronger; the neck thicker and shorter; the horns heavier, longer and straighter, and not so gaily carried or so refined as in the original Kerry.

Origin of the Dexter.—The origin of the Dexter is not known. Tradition suggests that the breed was either introduced by a breeder named Dexter, or that it was an offshoot of a diminutive, deep-bodied, old Irish cow with short legs and a heavy bag, from the neighbourhood of Cork and Limerick, mated with a small Kerry bull. Professor Wilson suggests that the Dexter is the result of crossing imported Devon cattle with the Kerry.

Registration of the Breeds.—Both breeds have been in high favour at shows. Their common interests are safeguarded in Ireland by the Kerry and Dexter Herd Book Society (founded 1890) and in Great Britain by the English Kerry and Dexter Cattle Society (founded 1892). The registration of the two is separate, and a cross between the Kerry and Dexter is considered a half-breed and cannot be entered.

A difficulty in breeding Dexters pure is that occasionally they do not breed true to type, and furthermore they are apt to produce calves so misshapen as to be either born dead or to have to be destroyed.

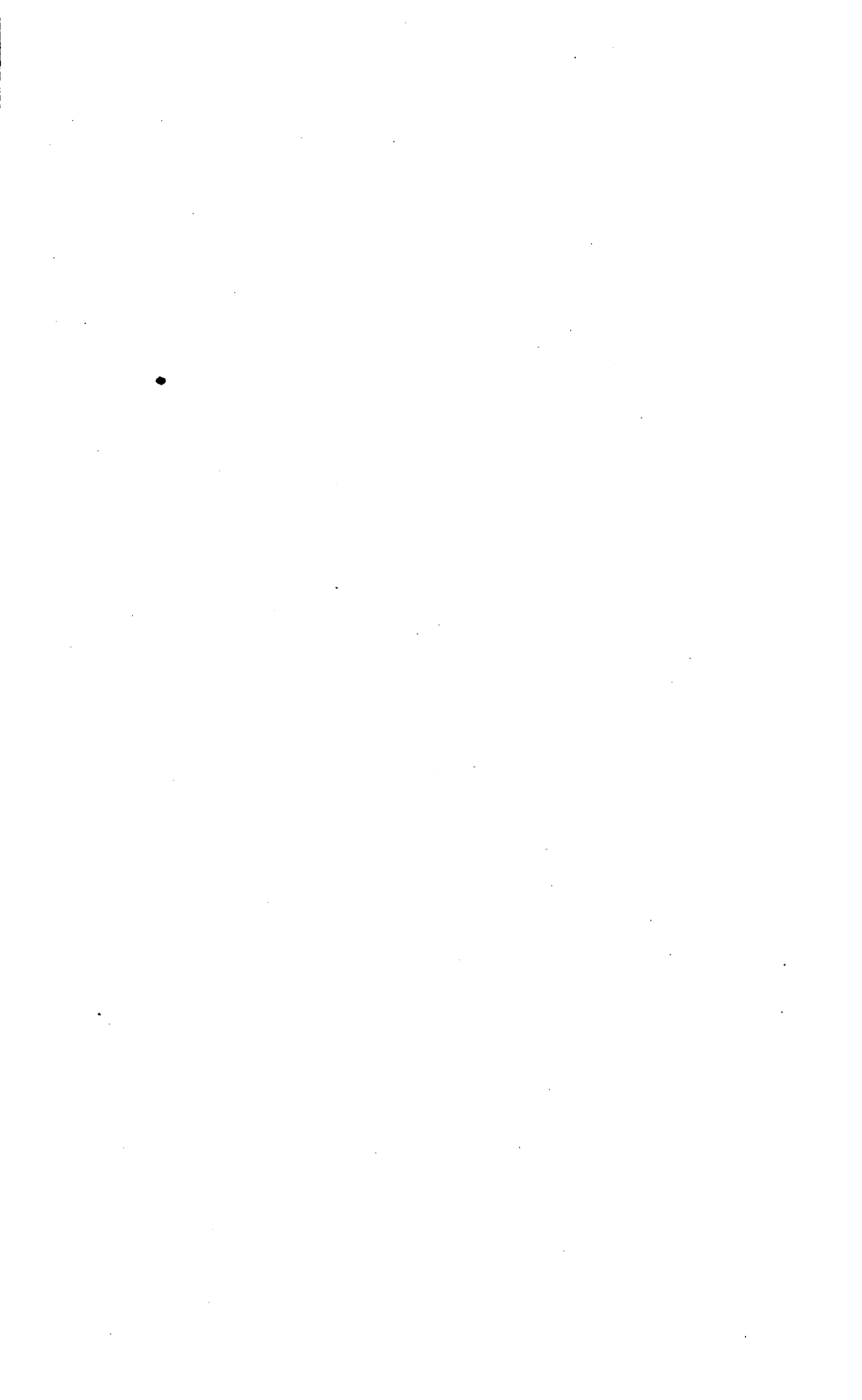
Value of Crossing.—Both Kerries and Dexters cross well with other breeds, whether beef-producing or milking. The Dexter-Shorthorn cross is a remarkable butchers' animal on short legs, with immense breadth and substance. The unique breed of Dexter-Shorthorns at Straffan, Co. Kildare, was formed by the use of pedigree Shorthorn bulls during a period of 35 years on one Dexter heifer and her female progeny by the said bulls, and after that time, by mating the male and female progeny. The diminutive size and superior milking powers of the Dexter were then permanently blended with Shorthorn colour, form, and beef-producing qualities, although the amount of Dexter blood present after a lapse of 40 years must have been almost a negligible quantity. The cross with the Aberdeen-Angus bull ranks quite as high as a butchers' beast. Both crosses are always prominent in the leading Fat Stock Shows.



KERRY COW, "FENELLA."
First Prize, Royal Agricultural Society's Show, 1911.



DEXTER BULL, "COWBRIDGE GENERAL."
Champion, Royal Agricultural Society's Show, 1909.



DEXTER CLASSES AT THE SMITHFIELD SHOW, 1902-1911.

(a) *Average Ages, Live Weight, and Daily Increases.*

Class.	Number in class (10 years.)	Average age.	Average live weight.	Average daily increase from birth.
		yrs. mths. days.	cwt. lb.	lb.
I. Steers not above 2 years ...	56	1 9 12	7 17	1·23
II. Steers, 2 to 3 years ...	60	2 8 1	8 102	1·02
III. Heifers not above 3 years	43	2 5 21	7 34	0·94

(b) *Highest and Lowest Daily Increases.*

—	Average age.	Average live weight.	Average daily increase from birth.
	yrs. mths. days.	cwt. lb.	lb.
Class I. Young steers... 7 best ...	1 8 22	8 63	1·52
" " " " ... 7 worst	1 10 16	5 75	0·93
" II. Old steers ... 8 best ...	2 8 6	10 68	1·21
" " " " ... 8 worst	2 8 29	7 36	0·82
" III. Heifers ... 5 best ...	1 10 10	7 74	1·26
" " " " ... 5 worst	2 8 26	6 60	0·73

MILKING TRIALS AT THE LONDON DAIRY SHOW,
1907-1911.

Breed.	Num- ber of Cows.	Average Weight of Milk for one day.	Composition of Milk.			
			Fat.		Solids-not-Fat.	
			Morn- ing.	Even- ing.	Morn- ing.	Even- ing.
		lb.	Per cent.	Per cent.	Per cent.	Per cent.
Shorthorn, Pedigree (Cows)...	75	47·2	3·35	4·03	9·08	8·89
Shorthorn, Pedigree (Heifers)	51	29·7	3·27	3·59	9·26	9·17
Shorthorn, Non-Pedigree (Cows).	88	52·2	3·51	4·07	9·04	8·86
Shorthorn, Non-Pedigree (Heifers).	40	35·3	3·32	3·68	9·32	9·18
Lincolnshire Red Shorthorn (Cows).	38	48·8	3·30	4·13	8·98	8·87
Lincolnshire Red Shorthorn (Heifers) 1911 only.	6	32·3	3·28	3·70	9·32	9·33
Jersey (Cows)	86	34·9	4·69	5·48	9·29	9·06
Guernsey (Cows)	20	32·6	4·54	4·87	9·29	9·09
Red-Poll (Cows)	38	39·5	3·49	3·84	9·12	9·03
Red-Poll (Heifers)	31	28·9	3·73	3·87	9·32	9·25
Ayrshire (Cows) no records for 1909.	13	37·3	2·91	3·56	8·79	8·59
South Devon (Cows) 1909-11 only.	15	47·2	3·51	4·04	9·22	9·02
Kerry (Cows)	22	35·3	3·78	4·27	9·10	8·90

BRITISH BREEDS OF SHEEP.

The British breeds of sheep are classified in various ways—horned and hornless, dark-faced and white-faced, mountain and lowland, short-woolled and long-woolled; but the most common plan is to divide them into Mountain breeds, Long-woolled breeds, and Down breeds. As in most classifications, it is difficult to draw sharp lines, but the three classes are fairly distinct. There are no fat-tailed or tailless sheep in this country, and except in the case of a few specimens of four-horned sheep surviving in the Western Islands of Scotland, the horns, where present, are restricted to one pair.

There is a remarkable amount of variation in British sheep, but in all, the carcase is the chief consideration, and though some of them cannot be surpassed for weight of fleece, and others are in the first rank as regards fineness of wool, there is no breed corresponding to the Merino kept almost entirely for wool production. It will, therefore, be convenient before discussing the different breeds in detail to mention the general points and characteristics regarded as desirable in sheep kept principally as mutton producers.

1. A wide, deep body, compact and well-balanced, with an easy graceful carriage.
2. A well-carried head, characteristic of the breed, with good depth and strength of jaw, broad across the bridge of the nose; full bold, bright eyes, indicating both docility and courage. In a ram the head must be thoroughly masculine in character though not coarse; in a ewe it should be more refined but not weak.
3. The neck, thick towards the trunk, fitting well and evenly into the shoulders so that the junction is almost imperceptible, tapering to the head, arching slightly, medium in length, and free from "throatiness" at the junction with the head.
4. The chest, broad, deep, and projecting well in front of the forelegs.
5. The back, level and broad throughout its length (though some of the mountain breeds have sharp shoulder-tops or withers), with an even covering of firm and muscular flesh; under and upper-lines straight.
6. The ribs, well sprung and deep.
7. The shoulders, well laid and covered with firm flesh. The regions immediately behind the shoulders level and free from hollows.
8. The thighs and also the arms and the fore flanks, thick and fleshed well down.
9. The quarters, long, deep, and wide, and not drooping too much towards the tail; little space between them and the last ribs.
10. The legs, straight, set wide apart, and not too long; the bone clean and fine, neither coarse nor deficient.

11. Feet, fairly large, sound and hard ; pasterns, strong.
12. The characteristic wool of the particular breed covering the whole body well and evenly.

LONGWOOLLED BREEDS.

Longwoolled sheep—of which the chief breeds are—the Leicester, Border Leicester, Lincoln, Romney Marsh, Cotswold, Wensleydale, South Devon, Devon Longwool, and Roscommon—are associated with fairly rich soils or with arable districts in which food is plentiful, and are characterised by their absence of horns, great size, long wool (usually possessing the silvery glistening appearance described as “lustre”), heavy fleece, white, or almost white, face and legs. They are as a rule quickly growing and easily fattened, but the carcasses are apt to be too fat, and the mutton is as a rule of only second-rate quality, being of poor flavour and colour, and coarse in the grain.

Without exception all the Longwoolled breeds have been, at one time or other, improved by crossing with the Leicester.

THE LEICESTER.

History of the Leicester.—The Leicester was the first British breed improved by systematic selection and in-and-in-breeding. Bakewell, at Dishley in Leicestershire, began the system about 1755, and his efforts were aided by the simultaneous extension of the cultivation of the turnip as a field crop, which provided what was unobtainable before—a liberal supply of succulent winter food. The old ungainly slow-maturing Leicester, which had been bred merely for size and a heavy fleece, was transformed into an early-maturing, compact, symmetrical, moderate-sized animal, possessing great aptitude to fatten, and a marvellous power of communicating its own qualities to breeds with which it is crossed. Bakewell aimed at producing a valuable carcase, and regarded the fleece as a secondary consideration. He originated the practice of letting out rams for the season instead of selling them. This gave him a large number of sheep to select from in pairing different types. It took 20 years so to convince his neighbours of the soundness of his system that they were willing to pay a 10-guinea fee for the hire of some of his choicest rams. Four or five years later the fee rose to 100 guineas, and in 1786 he let two-thirds of the service of a ram for 200 guineas, and received in all 1,000 guineas for hires. So quickly did the merits of his sheep grow in public favour that “in 1789 he made 1,200 guineas by three rams, 2,000 guineas by seven others,” and 3,000 guineas for the remainder. His highest rate was 800 guineas from two breeders for two-thirds of the season’s services of his favourite, “Two-pounder.”

The Dishley Society was formed in 1790 for the preservation of the purity of the Leicester, and, by means of rules of extraordinary stringency, an attempt was made to create a sort of monopoly in the interests of Bakewell and a few friends. The only unselfish condition of interest was that “no member shall give his rams at any season of the year any other food than green vegetables, hay and

straw." Such fame did the Dishley Leicesters gain that "within little more than half a century they spread over every part of the United Kingdom," and by 1837 there were "few flocks of Longwool sheep in England, Scotland, or Ireland which were not in some degree indebted to Bakewell's flock. No other sort of sheep possessed so great a propensity to fatten or become fit for the butcher at so early an age, but they could not travel far for their food, nor could they bear, so well as many others, occasional scantiness or deprivation of nourishment." Other drawbacks besides delicacy of constitution were "shortness and lightness of fleece, and the scarcity of doubles, which was a result of discarding the ewes that bore twins to get large single lambs when they were high-priced. The great value of the breed consisted in the improvement effected in almost every variety of sheep that it crossed."

For the greater part of the nineteenth century the Leicester well held its own as a commercial sheep, but with the modern demand for small lean carcasses and high quality mutton, it has in some districts, where it formerly occupied a leading position, been replaced by other breeds, though probably the extension of dairying in some of its former strongholds has affected it quite as seriously. It is however still kept in large numbers for ordinary commercial purposes in the north of England, and recently there has been a considerable revival of interest in the breed.

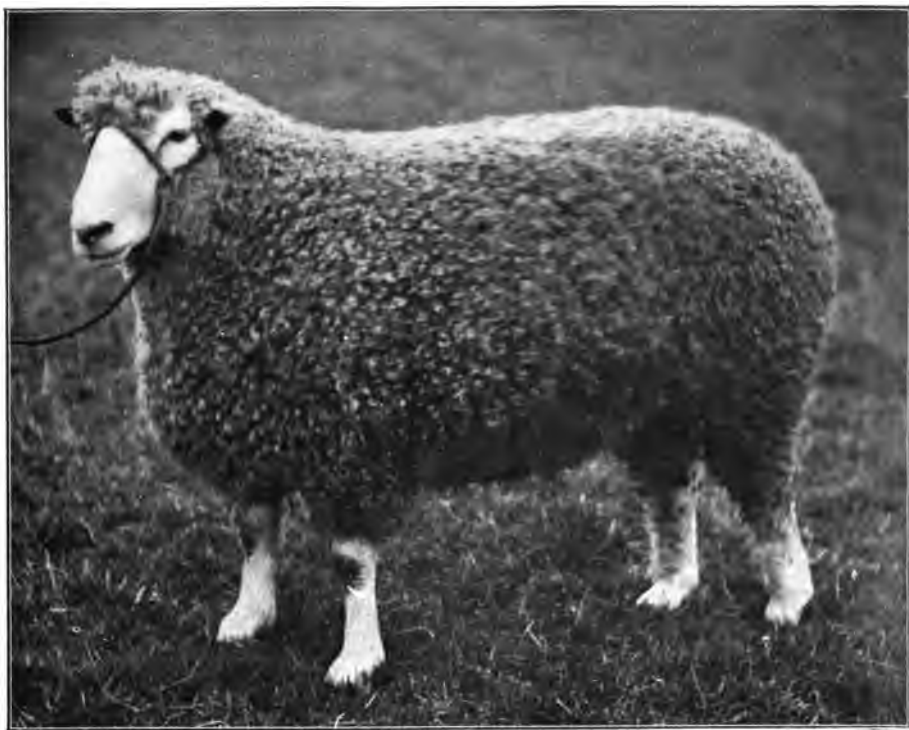
Since the formation of the Leicester Sheep-breeders' Association in 1893, greater and more systematic attention has been paid to the development of the breed, and as a result the Leicester is now a sheep of greater size and weight of wool, while it retains its old characteristics of early maturity and rapid fattening. The fleece particularly has been improved. Shearling rams in the best flocks will clip up to 17 or 18 lbs., and the wool makes as good a price as that of any Longwoolled breed.

The chief area for the breed, both as regards registered flocks and commercial stock, is now East and North Yorkshire, particularly the Wold districts; a good many flocks are also kept in Cumberland, Lancashire, and Westmoreland, and a few in other counties, including Leicestershire, the original home of the sheep.

At present the best markets for breeding-stock abroad are New Zealand and Australia, but large numbers are kept in Canada and the United States, and the Leicester is well-known in all sheep-breeding countries.

Characteristics of the Breed.—A few distinguishing points of the present day Leicester are:—Lips and nostrils black, nose slightly narrow and Roman, but the general form of the face wedge-shaped, and covered with short white hairs with a bluish tinge (a pinky face and soft hair are believed to show lack of constitution); forehead covered with wool; no horns; ears blue, but sometimes white, thin, long, and mobile; black specks on the face and ears not uncommon; neck short, and level with the back; great thickness from blade to blade of the shoulders and through the heart; fine bone; a fine, curly, lustrous fleece (the sheep should be well woolled all over), free from black hairs; firm flesh, springy pelt, and pink skin.

The impressiveness, early maturity and rapid fattening powers of the breed make it a favourite cross in many districts, particularly



LEICESTER RAM.
First Prize, Royal Agricultural Society's Show, 1911.



LEICESTER SHEARLING EWES.

perhaps for the production of early fat lambs. The rams are, however, not used so much for pure mountain ewes as for "Mashams" and other first crosses.

Leicester Sheep at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	117	8 12	1 50	0.64
Wethers above 12, under 24, months.	120	20 10	2 56	0.45

THE BORDER LEICESTER.

There is some difference of opinion as to the exact relationship between the "English" Leicester and the Border Leicester, though it is quite certain that both had their origin in Bakewell's Dishley breed. The brothers Culley, who were pupils of Bakewell, took with them to Northumberland both rams and ewes from the Dishley flock, and it appears probable that pure flocks of Leicesters were soon established on both sides of the Border. Up to the middle of the nineteenth century it was quite a common practice for northern breeders to take rams from the south, but from that time the practice ceased, and in 1869 there was such a difference between the two branches of the breed that the Highland and Agricultural Society provided separate classes at its show. Whether that difference was partly due to a dash of Cheviot blood in the Border race as some suggest, or whether it was entirely due to differences of environment and of ideals in breeders' minds is not certain. It is certain, however, that the Border Leicester has been bred pure as a separate breed for at least the last 60 years. From the Border district the breed soon spread, until now pure flocks are to be found in every lowland district in Scotland, and they are also largely kept in Ireland. The Border Leicester is one of the leading breeds in New Zealand, is extensively kept in Australia and Canada, and to these and other countries large numbers of rams are exported every year.

Value for Crossing.—The Border Leicester is a big, quickly growing, easily fattened, sheep, with a fair fleece of wool, but few flocks are kept for ordinary commercial purposes. Great numbers of rams are, however, required every year in Scotland for crossing with the Cheviot, Blackface, and—though to a less extent now than formerly—Half-bred ewes. The crosses are early maturing, easily fattened sheep, producing mutton of high quality, and while the Border Leicester is one of the largest of the Longwool breeds, the comparative fineness of head and bone makes the rams fairly safe for use even with small mountain ewes, and there is seldom trouble in lambing.

Characteristics of the Ram.—The following are a few distinguishing characteristics of the Border Leicester Ram. The head is long, and well carried on a neck of good length and ample substance at the base; broad, but not high on the crown, nor too heavy behind the ears, the two latter points in the ram involving difficulty of lambing in this as in other large breeds. Too much strength in the head is frequently correlated with coarseness in the animal. The profile should be slightly aquiline, with a strong masculine appearance, tapering to a black and square muzzle; the dense covering of hair on the face and legs uniformly white and hard (but not so wiry as in the case of the Cheviot), free from any trace of wool, and extending well back behind the ears; the ears, fairly erect and a good size, placed not too wide apart, white inside and out, with occasional black spots; the belly light, carrying little offal, and giving a somewhat leggy appearance, especially after shearing; the wool long and close, soft, and in little ringlets or pirls, wavy throughout its length, but not open to the skin; on being gripped it should fill the hand; the ram should carry a heavy fleece with the wool well down on the legs and with the belly well covered. Sheep deficient in the latter respect are not so well fitted to withstand unfavourable conditions.

The Society of Border Leicester Sheep Breeders was established in 1898, and the first volume of the Flock Book was issued in 1899.

HALF-BRED SHEEP.

The Half-bred, as the name implies, is a cross (Border Leicester and Cheviot) but is so extensively bred and has such distinctive characteristics that it is worthy of special note. A striking point is the fact that Half-bred sheep can be bred fairly true to type from Half-bred parents, and both systems of breeding are adopted. It is generally said that the first cross is hardier and better woolled, but that by mating Half-bred and Half-bred a bigger and longer sheep is produced, which is, however, not so well suited for upland exposed conditions.

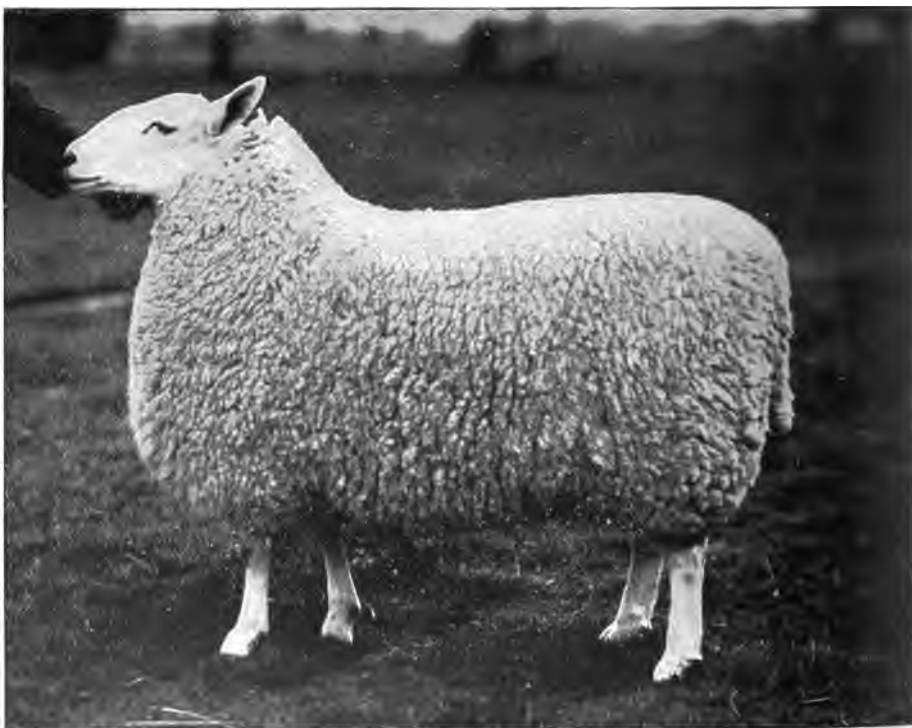
The wool is close, thick, and fine, more like that of the Cheviot than that of the Border Leicester.

Half-bred sheep are bred in great numbers in the border counties of England and Scotland and in Caithness and Sutherland in the North. The ewes are extremely prolific and good mothers (it is fairly common on good low ground for a fairly large flock of old ewes to rear on an average two lambs each) and are sold to go to all parts of the north of England and the lowlands of Scotland for breeding purposes. Formerly in Scotland they were almost all crossed with Border Leicester rams producing "three-quarter breeds," but now a great proportion are put to Down rams, particularly Oxfords, Suffolks, Shropshires, and in England, Hampshires, to produce lambs which are of excellent quality and can be sold at almost any age. The Border Leicester lambs are excellent for early fattening, but they must be got off when young, otherwise the carcase is apt to be too fat for modern tastes.



BORDER LEICESTER RAM.

First Prize, Royal Agricultural Society's Show, 1911.



HALF-BRED (BORDER LEICESTER-CHEVIOT) SHEARLING RAM.

Champion Highland and Agricultural Society's Show. First Prize, Edinburgh and

THE LINCOLN.

The Lincoln Longwool is a white-faced breed with a woolly tuft on the forehead. It easily holds the first place in this country as a wool producer, and is the largest and heaviest of all breeds of domesticated sheep.

Characteristics of the Old Type of the Breed.—The old Lincoln was classed by Professor Low in *Domesticated Animals of the British Isles*, along with the Romney Marsh, as "Longwool sheep of the fens and alluvial country," distinct from long-woolled sheep of the plains such as the Leicester and Teeswater. It was "of large size and coarse form; the wool long, thick, and tough in the filaments, of inferior felting properties, but soft to the touch, and rarely approaching to the harsh and wiry character of hair, unsuitable for carding, and never prepared except by combing for worsted yarn. The fleeces weigh from 10 to 12 lb. and those of the rams and fat wethers often greatly exceed that weight. The animals fatten slowly, and consume much food, but are valued by the butchers for their tendency to produce internal fat." Youatt's description completes the picture: "They had white faces and legs, forward, loose shoulders, and heavy head, with a large neck, and sinking dewlap; the bones large, and the carcass long and coarse; the back long and hollow, with flat ribs, but good loins and a deep belly; the hind quarters broad, and the legs standing well apart. The pelt was particularly thick, and the fleece consisted of very long combing wool of a rather coarse quality, weighing generally from 12 to 14 lb. The flesh was coarse-grained and inferior, but it frequently reached the weight of 35 lb. per quarter; and fat wethers generally averaged 25 lb."

Subsequent Improvement in the Type.—For a time Lincoln breeders were jealous of the Leicester breeders, and confined their operations to their own flocks; but ultimately a rapid way to improvement was found through the introduction of improved Leicester blood, and by frequent crosses with the Leicester the present day Lincoln was evolved. The change was said to have reduced the size and increased the aptitude to fatten and tendency to early maturity, "while the wool is shorter and finer, though it wants the toughness, softness, and length of fibre of the true old Lincoln breed," the wool of which was "altogether peculiar, and such as no country in Europe possessed." Whatever the original results may have been, the objectionable features of the first crosses have long been removed, and there is little doubt that the long, strong, lustrous wool of the Lincoln breed of to-day is superior to that of any former time. The staple (or locks consisting of many fibres of wool arranged in natural bundles) of well-bred hogs should be as broad as two of a man's fingers, and may be up to 20 inches in length, and is characterised by its bright lustre and wavy appearance. Rams have been known to yield fleeces of 28 lb., and ewes will clip up to 14 lb.

It cannot be claimed that the mutton of the Lincoln is of the highest quality, but the carcasses contain a greater proportion of lean meat than those of some others of the Longwool breeds. The breed is kept in very large numbers both in commercial and registered flocks (of which there are nearly 300) in Lincolnshire

and adjoining districts. The majority are kept pure, but a considerable number of ewes are crossed with Down rams, chiefly Oxford, Hampshire, Suffolk, and Shropshire.

Value for Crossing.—In spite of the mutton being not of the first quality, the unequalled power of wool-production and large size, weight, and symmetry of carcase have brought the breed into the highest repute in sheep-rearing countries abroad, where it has mated most successfully with Merino ewes to form a good general-purpose sheep for both wool and mutton. Over 20 years ago a breed of Lincoln-Merinos was formed in New Zealand, under the name of the Corridale breed, by mating superior specimens of the two breeds; and an intermediate type has been subsequently fixed by thorough elimination of undesirable forms.

Export of Lincoln Sheep from Great Britain.—Up to the present the most notable year as regards the export of Lincoln sheep was 1906, when, for the year ending September 30th, certificates were issued by the Lincoln Longwool Sheep Breeders' Association for 3,674 rams, 1,614 ewes, 339 ram lambs, and 333 ewe lambs, total 5,960, an increase of 1,758 over the previous year's total. An important event in the history of Lincoln sheep was the sale of the entire flock (950 animals) of Messrs. R. and W. Wright, of Nocton Heath, Lincoln, to Señor Manuel Cobo, of Buenos Aires, for £30,000. The flock was founded in 1790, and was one of the most famous in the country. The same purchaser secured the Royal Champion Shearling Lincoln Ram, Riby Derby Champion, for the record price of 1,450 guineas at Mr. Henry Dudding's Annual Sale. The exports for 1908-9 were 1,184 rams, 239 ewes, 106 ram lambs, 43 ewe lambs, distributed as follows:—669 to Buenos Aires, 11 to Holland, 12 to Australia, 7 to Germany, 55 to Canada, 12 to the United States, 28 to North America, 16 to Spain, 28 to Russia, 616 to South America, 2 to Uruguay, and 1 to France; or a total of 1,566, against 2,559 in the previous year.

The first volume of the Lincoln Longwool Sheep Breeders' Flock Book was issued in 1892.

Lincoln Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	108	9 22	1 100	0·72
Wethers above 12, under 24, months.	105	21 15	2 111	0·51

THE KENT OR ROMNEY MARSH.

This breed of Longwoolled sheep takes its names from the district and county in which it originated, though at the present time it is by no means confined to Kent. Registered flocks are also to be found in Rutland, Herts, and Sussex, while large numbers of the sheep are annually taken for grazing to other districts.



LINCOLN RAM.
Winner of Several Prizes.



LINCOLN SHEARLING EWES IN FULL FLEECE.

The breed is an extremely old one, and though, like every other Longwool, it is doubtless indebted to the Leicester, yet to a greater extent improvement has been effected by selection within the breed, thus retaining the characteristic hardiness while securing symmetry, early maturity, and improved quality of wool.

During the thirties and early forties of the nineteenth century, grazing contests, which created widespread interest, were held throughout the Romney Marsh area under the management of local committees. Certain grazing lands were selected, and the sheep entered for competition were removed from the control of their owners and placed under the supervision of judges who decided, from the results of the test, which were the most useful sheep. The sheep were kept and shepherded under natural conditions, no artificial food or fodder being supplied.

Characteristics of the Breed.—Romney Marsh sheep are white-faced and white-legged, with an exceptionally close coat of good wool of a demi-lustre type. The head should be wide and level between the ears, with no horns or dark hairs on the poll, which should be covered with wool. The nose in all cases should be black and broad.

One of the most valuable and distinctive features of the breed is its resistance to diseases commonly affecting sheep; foot-rot and liver-rot seldom trouble it, and, unlike some Down breeds which tend to keep in dense flocks, the sheep graze and lie singly, thus to a certain extent avoiding tainting of their pasture.

Romney Marsh sheep are essentially graziers' sheep and are kept all the year round under natural conditions and normally fattened on grass alone. Compared with that of most Longwools the mutton is of good quality and free from excess of fat. Lambing takes place in the open, usually about March and April, and very rarely is any artificial food or shelter given.

Romney Marsh Sheep Abroad.—The breed is now found in most parts of the World. In New Zealand it is specially in favour on account of its hardiness and freedom from disease. In South America, particularly Chile, Patagonia, and the Falkland Isles, there is an increasing demand for the rams, and satisfactory reports have been received as to the suitability of the breed for North America, South Africa and other countries.

Flock Book.—The Kent or Romney Marsh Sheep Breeders' Association was formed in 1895 and stringent regulations were laid down regarding the admission of sheep or flocks into the Flock Book. At the beginning of 1912 there were 164 members of the Flock Book Society and 132 registered flocks.

Kent or Romney Marsh Classes at the Smithfield Show, 1902–1911.

Class.	Number of animals in Class during the 10 years.	Average age.		Average live weight.	Average daily increase from birth (weight at birth disregarded),
		mths. days.		cwts. lb.	lb.
Lambs under 12 months ...	198	8	9	1 44	0.62
Wethers above 12, under 24, months.	189	20	6	2 39	0.43

THE COTSWOLD.

Cotswold Sheep derive their name from the hills of the same name which extend over a considerable part of Gloucestershire and into Oxfordshire, and it seems possible that the hills in turn received their name from the "cotes" or shelters for the sheep on the bleak "wolds" or hills. The great antiquity of the breed is undoubted and it seems highly probable that it is one of the oldest in the country. From Norman times there are records of sheep in the country round Cirencester which were noted for their size and for the weight and quality of their fleece; from the 15th century onwards there are records of the export of Cotswold sheep and wool to the continent. About the end of the 18th century, improved Leicester rams were used, and imparted to the breed greater fineness of wool and bone, symmetry and compactness of carcase, and early maturity. It was found, however, that too free use of Leicesters tended to result in loss of hardiness, prolificacy and weight of fleece, and it is stated in the Flock Book that no Leicester blood was introduced later than 1830.

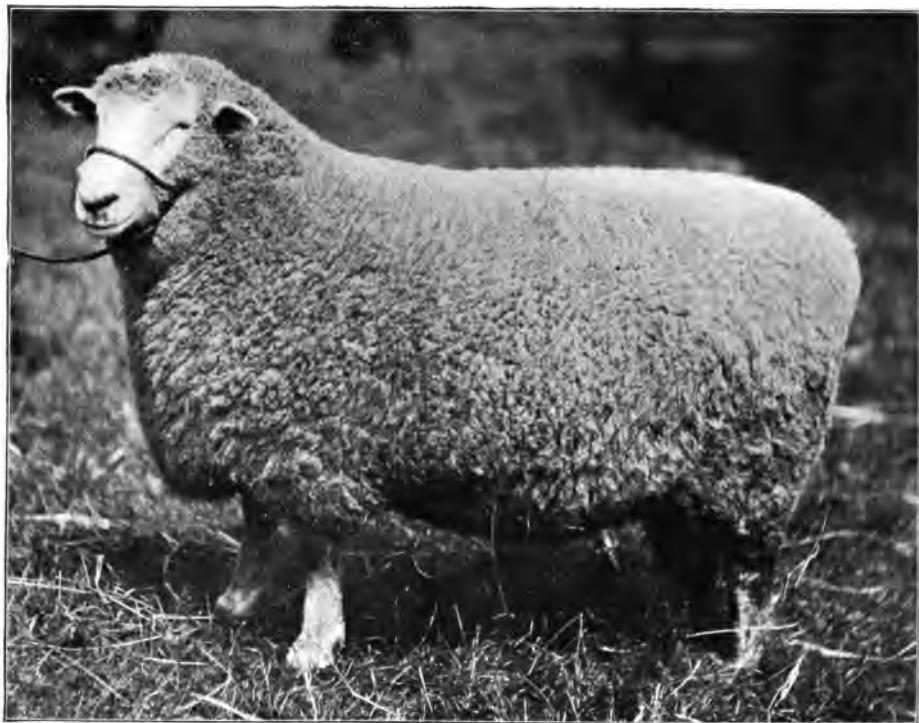
Characteristics of the Breed.—The Cotswold is sometimes claimed to be the biggest breed of sheep in the country, but it probably has to give way to the Lincoln in this respect.

It is noted for its hardiness and adaptability, and while its native habitat fits it for thin soils in a cold bleak district, it thrives better than most breeds when folded on wet heavy land. The sheep can be fed up to enormous weights, but, as in most Longwool breeds, the mutton of the older, heavier sheep is fat and of inferior quality though that of the lambs or young hogg is good.

Average flocks clip about 8 to 10 lbs of wool though higher weights are recorded. The fibre is long and strong, neither close nor too open, and slightly coarse in quality. In recent years more attention has been paid to weight and quality of wool.

The face of the Cotswold is strong, and the forehead is covered by a large tuft of wool which, when of full length, ought to reach almost to the nostrils. The colour of the face and legs is usually white, but a few of the present day sheep have grey markings. The head is carried well up, the carriage is bold and free, and the breed is noted for breadth and straightness of back well carried out to the rump (sometimes to an exaggerated extent) while the springing of the ribs and fulness of the breast gives a capacious chest.

Value for Crossing.—The Cotswold crosses remarkably well with Down sheep, and this has indirectly led to its decline in numbers in recent years. In its own country it has been largely replaced by the Oxford which was originally formed by crossing Cotswold and Hampshire Downs. With the modern demand for leaner mutton the Oxford has ousted to a great extent its longwoolled progenitor, and now practically all the pure bred flocks of Cotswolds are maintained to provide rams for crossing purposes. They are chiefly found in Gloucestershire but some old established flocks exist in the Eastern counties, where the sheep are in great favour for crossing with Suffolks.



KENT OR ROMNEY MARSH RAM.
First Prize, Royal Agricultural Society's Show, 1911.



COTSWOLD RAM.

Cotswolds have been exported to most parts of the world, the chief market being the United States and Canada, in which countries the breed is one of the best known of longwoolled sheep; in recent years many animals have been sent to the Argentine.

The Flock Book Society was established in 1891.

Cotswold Sheep at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mts. days.	cwts. lb.	lb.
Lambs under 12 months ...	21	9 4	1 73	0·66
Wethers above 12, under 24, months.	15	20 25	2 76	0·47

THE WENSLEYDALE.

The Wensleydale is a large, high-standing, long-sided, firm-fleshed Yorkshire sheep, and has a characteristic deep blue colour in the skin of the face, legs, and ears; this colour sometimes extends over the whole body, though the shade is darker on the bare or hairy parts. Pure flocks are kept very largely to supply rams for crossing, particularly with the various breeds of the Black-faced mountain race. On this account the dark colour in the face is favoured as increasing the darkness of the face of the cross lambs. In the north of England the cross with the Black-face is known as the "Masham," from the town in Yorkshire where a large sheep fair is held. In the lowland districts Masham ewes are often crossed again with Wensleydale or Leicester rams, the resulting animal being known as a "twice-crossed" lamb. The Wensleydale is one of the largest and heaviest of longwoolled sheep, but, being rather slow in maturing compared with Leicesters and Border Leicesters, it is chiefly used where lambs are to be sold as stores in autumn rather than as early fat lambs. Great numbers of "Mashams" and "twice-crossed" lambs are sold in the autumn fairs and fattened on turnips, particularly in the arable districts of Yorkshire and Lincolnshire.

In Scotland the rams are usually known as Yorkshires, and the crosses with the Blackface as Yorkshire crosses.

Origin of the Wensleydale.—The present breed is believed to have descended from a large white-faced variety, the "Mugs," of the Teeswater district of Yorkshire. The Dishley Leicester was employed to refine it, and the blue colour was introduced by Richard Outhwaite's Bluecap, a famous half-bred Leicester ram born in 1839, with a dark blue head and a nearly black skin.

Distinctive Characteristics of the Breed.—Bright, lustrous, long wool of open character, divided into uniform little knots or pirls, covers nearly the whole surface of the body. A fine tuft grows on the forehead and finely pirlled wool on the back of the

head, round the ears, and on the back of the hind legs almost down to the hoof, as well as on the belly and scrotum.

The head is of a good size, with a strong muzzle, and gaily carried on a long, strong neck, well set up on the shoulders, giving a particularly vigorous and stylish appearance.

The Wensleydale is remarkably active and hardy, and, except in the case of rams which have been fed up for Show purposes, the general custom is to turn the rams up on to the moors and hill grazings to the Blackface ewes. The carcase is lean, and the mutton is of higher quality than that of most Longwool breeds.

The name Wensleydale was assumed in 1876 to distinguish the breed in the showyard; and the two flock books, viz.: that of the Wensleydale Longwool Sheep Breeders' Association and that of the Wensleydale Blue-faced Sheep Breeders' Association, were both established in 1890. The division of the breeders into two sections is unfortunate; there appears to be no real necessity for two Flock Books though the conditions of entry are slightly different.

THE SOUTH DEVON SHEEP.

The South Devon is an ancient local breed of conspicuous merit, being the chief breed of Cornwall and largely in evidence in South Devon. The publication of the first volume of the South Devon Flock Book Association, in 1904, brought the breed into prominence. The oldest foundation flocks date back considerably over a century, although many have been established within the last 25 years.

Utility of the Breed.—The carcase is noted for fulness of lean meat, and the breed's capacity for laying on flesh was fully demonstrated at Smithfield in 1909, when the first pen of wether lambs gave the average daily gain from birth of 13·51 ozs., the record daily gain for lambs at Smithfield. It is claimed for the South Devon that it possesses great robustness of constitution; is large, symmetrical, and well grown, with plenty of bone and muscle; vigorous and thrifty and equally adapted to the fold or to grazing land; able to thrive upon hard fare and in exposed places. The head is a good size and well covered with wool; the ears, often black spotted, are well covered with hair. The fleece is of conspicuous merit—a long staple of lustrous wool, curly and dense on the pelt and free from kemp.

South Devon Sheep at the Smithfield Show, 1902–1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	36	9 18	1 104	0·74
Wethers above 12, under 24, months.	18	21 7	2 62	0·44

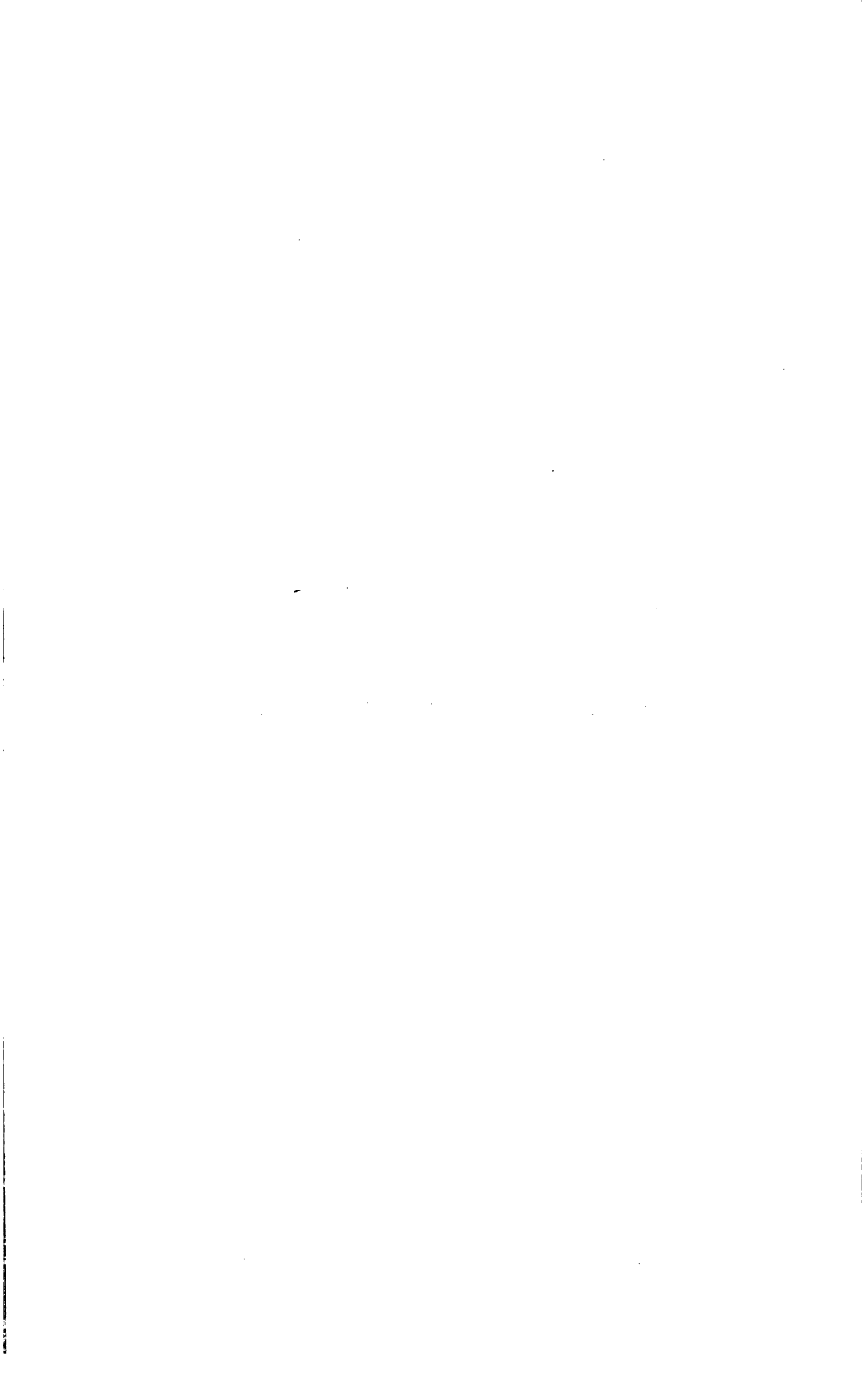


WENSLEYDALE RAM.

First Prize, Royal Agricultural Society's Show, 1911.



SOUTH DEVON RAM



THE DEVON LONGWOOL.

The Devon Longwool is a local breed kept in large numbers in Devon and Somerset, and was first brought to general notice in this country by the Bath and West of England Society offering special prizes for it at the Taunton Show in 1870. The establishment of a *Flock Book*, the first volume of which appeared in 1900, has brought it to the notice of foreign buyers.

Origin of the Breed.—Low, in 1845, recorded that the breed was produced by crossing with the improved Leicester two very distinct breeds, of great size, but coarse inferior quality, viz., the “Southern Notts,” from westward of the Vale of Honiton, “with brown faces and legs,” carrying “a fleece of long wool, moderately soft, weighing from 9 to 10 lb.”; and the “Bampton Notts,” on the borders of Devon and Somerset, “with white faces, a very heavy fleece of long wool, and carcasses weighing 30 to 35 lb. per quarter at two years old.”

The breed claims to have produced in 1846 the heaviest recorded carcase of a sheep fed in this country—that of a wether weighing 78 lb. per quarter. It also produces a heavy fleece of excellent long wool. The ewes are good nurses and the lambs strong and easily reared.

Devon Longwool Sheep at the Smithfield Show, 1902–1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	51	9 1	1 69	0·66
Wethers above 12, under 24, months.	24	20 23	2 33	0·41

THE ROSCOMMON.

The Roscommon is the only remaining pure breed of Irish sheep, and is believed to be extremely old. A typical Roscommon is a big upstanding sheep, as tall as the Cotswold or Lincoln, though not so heavy—a “hardy and active forager, which thrives well on bleak exposed uplands and on its native fertile plains, and is consequently a good tenant-farmers’ sheep.” The sheep are not noted for early maturity, being fed naturally and not forced, but the ewes are good milkers, and produce early-maturing lambs by Shropshire or other Down rams. Although more or less indebted to the English Leicester cross, most of the improvement wrought in the breed has, it is believed, been due to the careful selection of rams by private breeders within the breed itself.

The breed is hornless and the head gaily carried; the face long and white, with or without a tuft of wool on the forehead; the

muzzle of the ram strong ; the ears fine in texture and of medium length ; the tail broad ; the fleece white, long, and heavy, with a broad staple and bright texture. At the block test competition at the Dublin winter shows, the mutton has been proved to be "splendidly grained, evenly mixed with fat and lean, and of excellent quality."

DOWN BREEDS OF SHEEP.

Perhaps the simplest way of defining this class is to include all the breeds which are more or less directly indebted to the South Down. This would include in addition to the South Down, the Shropshire, Suffolk, Hampshire, Oxford and Dorset Downs. The various Down breeds were originally generally associated with "Downs" or similar districts of fair elevation with dry soils and climate, but are now found under a wide range of conditions in all parts of the country.

The Down Sheep mentioned above are hornless, dark-faced and dark-legged, and the majority have close fine wool, comparatively short in length and with fleeces of medium weight. The most important feature from an economic point of view is the quality of carcase and mutton ; they do not readily become too fat even when fed to great weights, and the mutton is of superior quality being firm, fine in the grain, and rich in colour.

Along with the Down breeds may be included a few breeds—Dorset Horn, Ryeland, Western and Kerry Hill—which do not readily fall into any of the three classes usually adopted, and which ought probably be separately classed.

THE SOUTHDOWN.

The Southdown breed of sheep is known to have existed for a long period in its native home on the range of low chalk hills from which it takes its name, and even a century ago it was famous for hardiness and extremely fine flavour of mutton. The modern refined and symmetrical animal has been developed from the original stock solely by selection, no foreign blood having been introduced, and the breed is undoubtedly one of the oldest and purest in the country.

Characteristic features of the Southdown.—A description of the general characters and appearance of a typical Southdown sheep is set forth in the Flock Book published by the Southdown Sheep Society (founded 1892) from which the following is extracted :—

Head, wide, level between the ears, with no sign of slug or dark poll. Face, full, not too long from the eyes to the nose, and of one even mouse colour, not approaching black or speckled ; under jaw, light. Eyes, large and prominent. Ears, of medium size and covered with short wool.

Neck, wide at the base, strong and well set on to the shoulders ; throat clean. Shoulders, well set, and the top level with the back,



DEVON LONGWOOL RAM.

First Prize, Royal Agricultural Society's Show, 1911.



SOUTHDOWN RAM.

Chest, wide and deep; back, level, with a wide flat loin well ribbed up; ribs well sprung, and fore and hind flanks fully developed.

Rump, wide, long and well turned; tail, large and set on almost level with the chine; legs of mutton (including thighs which should be full) well let down, with a deep wide twist.

The wool, of fine texture, great density and not too short in the staple, covering the whole of the body down to the hocks and knees, and right up to the cheeks, with a full foretop, but not round the eyes nor across the bridge of the nose. The skin, of a delicate bright pink.

The legs, short, straight, of one even mouse colour and set on well outside the body; the carriage, "corky."

Quality of Mutton and Wool.—No breed surpasses the Southdown for rapidity of feeding and early maturity. The carcasses provide the small neat joints demanded at the present time, the mutton is of the highest quality and commands top prices in the markets. Evidence as to the quality of carcase is afforded by the records of the performances of the breed.

At the Smithfield Show in the last ten years the Championship of all breeds in the classes for live sheep has on five occasions been awarded to Southdown sheep. They have also been successful in the Carcase Competition. In 1910 the Champion carcase was a pure-bred Southdown, and in 1911 animals of the breed were awarded first and second prizes for pure Short-Woolled Wethers. Similar distinctions have been gained at the Chicago International Exhibition.

The wool is remarkably close and compact, of very fine texture and quality, and realises the highest price for British wools.

Value for Crossing.—The Southdown when crossed with other breeds readily transmits to its offspring its symmetry and fine quality of mutton and wool. The rams have been used for crossing with almost all breeds of British sheep and they have been exported to practically every country in the world. At the Smithfield Show in 1911, the first, second, and third prizes for both cross-bred Wethers and cross-bred Lambs in the Carcase Competitions were secured by sheep sired by Southdown rams, and in the classes for live cross-bred sheep the Cup and Reserve for Cup, as well as a number of the leading prizes, were taken by animals similarly bred.

Southdown Classes at the Smithfield Show, 1902-11.

Class.	Total number of animals in Class during the 10 years.	Average age.		Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mtchs.	days.	cwts. lb.	lb.
Lambs under 12 months ...	423	9	18	1 35	0.50
Wethers above 12, under 24 months.	297	21	9	1 89	0.31

THE SHROPSHIRE.

The Shropshire is the most cosmopolitan of all the Down breeds. It is noted for symmetry and quality of carcase, hardiness of constitution, value for crossing, and adaptability to different soils and climates. It has a fairly heavy fleece of fine bright wool; and a superior quality of mutton, accompanied by darkness of the hair of the face and legs. It has been crossed with success with sheep of almost all pure breeds, and with the common mongrels which constitute a large proportion of the sheep flocks of the world.

Over 2,000 registered Shropshires were exported in the great export year, 1906, and they went to the following countries:—Australia, New Zealand, Tasmania, Japan, Canada, United States of America, Argentine, Uruguay, Chili, Brazil, Jamaica, Demerara, Natal, South Africa, Algiers, Germany, France, Russia, Spain, Sweden, Denmark, and Finland.

Origin of the Breed.—One of the parents of the breed was a black-faced or brown- or spotted-faced horned sheep which grazed on Morfe Common, near Bridgnorth, and produced wool of a superior quality. This Morfe sheep was said by Youatt to resemble the Ryeland in many points, or to be a variety of it. Cannock Chase, in Staffordshire, carried a heavier type of sheep, from which many of the Staffordshire Shropshires were descended. It is usually agreed that the improved Southdown ram was employed to develop the various original slow-maturity foundation breeds (which also included the Longmynd blackfaced horned sheep) into the modern hornless early-maturity Shropshire. The two pioneer breeders were Samuel Meire, of Berrington, and George Adney, of Harley, the blood of whose sheep is present in “nearly every flock of repute at the present day.”

It was not till 1859 that the Shropshire was admitted into the Royal Society's prize sheet and recognised as a distinct breed, though specimens were exhibited at the show in 1853 at Gloucester. This gave a strong impetus to further development, which went steadily on till at the Shrewsbury Royal Show in 1884 there were 875 Shropshires presented to the judges. Sixty exhibitors hailed from fifteen counties.

Wide Distribution.—The irregularity of type which at one time existed has now disappeared from the Shropshire, and its outstanding merits have led to the driving out or the reduction in numbers of many of the native breeds of the country.

Characteristics of the Breed.—The Shropshire Sheep Breeders' Association and Flock Book Society was formed in 1882, and a historical notice of the breed appears in Volume III of the Flock Book, from which the following distinguishing points have been extracted:—“The head and the face (which should not be too long) should be completely covered with fine white wool; the face and legs a nice soft black in colour; the ears also dark and small or medium, fleece very dense, fine and of medium length; the body and legs covered with an even quality of wool—coarse wool about the thighs, or light and thin wool on the shoulder points being a great fault, as also are patches of black or grey wool. The skin



SOUTHDOWN EWES.
Champion Prize, Royal Agricultural Society's Show.



SHROPSHIRE RAM.

is pink, and free from blue or dark spots, the body square, on short, straight, stout legs, with good bone." A good average weight of fleece in an ordinary ewe flock is 7 or 8 lb.

Shropshire Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	120	9 1	1 47	0.58
Wethers above 12, under 24, months.	108	21 5	2 30	0.39

THE SUFFOLK.

The Suffolk breed was originally formed by crossing Norfolk Horned ewes with Southdown rams. In 1859 classes were opened for the breed at the Suffolk Agricultural Association Shows, and thenceforward it was given the name of "Suffolk."

From its Norfolk ancestors the Suffolk has inherited fecundity, hardiness and activity, while from the Southdown it derives its compactness of form and quick-fattening power. Suffolk mutton combines the leanness of the Norfolk with the fine grain and symmetry of carcase of the Southdown.

The breed has made rapid progress since 1886 when it secured separate classes at the Royal Agricultural Society's Show and when the Suffolk Sheep Society was established.

Characteristics of the Breed.—The following are the distinguishing points which the Society regards as desirable :—Head hornless, and generally free from wool, though a small quantity of clean white wool on the forehead is not objected to ; face long, and, like the legs below the knees and hocks, well covered with jet black hair of fine texture ; muzzle moderately fine ; ears fine, black and medium in length. Neck of moderate length and well set (in rams stronger, with a good crest). Skin fine, soft and pink. Legs and feet straight and black, with fine and flat bone ; woolled to the knees and hocks, clean below. Belly (also scrotum of ram) well covered with wool. Fleece, of moderately short, close fine fibre, without tendency to mat or felt together. A good average ewe flock will clip from 5 to 7 lbs. each. The new-born lamb has a uniform grimy colour all over the tips of the wool, not patchy like the lambs of the old Norfolk breed.

The ewes make good mothers and 150 lambs *reared* per 100 ewes is a frequent average. Returns collected by the Suffolk Sheep Society show the average proportion of lambs reared by registered ewes from 1887 to 1911 to be 133.9 per cent., and the average loss of ewes between mating and weaning only 3.8 per cent. Suffolk sheep are hardy, and while they pay well for generous treatment they can find a living on bare pastures where many other breeds would starve. This, along with their ability to travel long distances, makes them well fitted for grazing districts where

pasturage is not of the highest quality. The Suffolk is an early maturing sheep; well grazed wether lambs are ready for the butcher at six months, and at eight or ten months yield a fine lean carcase of 80 to 90 lbs. Ram lambs are largely used for breeding purposes in preference to older sheep.

Quality of Mutton and Carcase.—As proof of the exceptional quality of Suffolk carcasses it is only necessary to refer to the records of the leading fat stock shows. In the carcase competitions at the Smithfield Show during the last 11 years Suffolks and Suffolk crosses have secured 69 prizes, including 29 firsts, out of a possible total of 176 in the "short-woolled" and "cross-bred" classes, while in the same period Suffolk sheep obtained the Championship on six occasions in competition with all other breeds. The carcase is particularly noted for leanness and absence of wasteful fat.

Value for Crossing.—Suffolk rams are extensively used for crossing with ewes of other breeds. Crossed with the Longwool breeds the quality of carcase of the ram is combined with the size and fleece of the ewe. Large numbers are used in the North of England and in Scotland for crossing with Half-bred and Cheviot ewes, though to a great extent the Oxford has taken the place of the Suffolk for crossing with Half-breds. While the home of the breed is in East Anglia it does well in other parts of England, and there is a good export trade to practically all the chief sheep-breeding countries. Among the most recent developments it may be mentioned that Suffolks are meeting with success in the Transvaal, where the rams meet with a ready sale for crossing with the native sheep.

Suffolk Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	180	9 20	1 87	0·68
Wethers above 12, under 24, months.	102	21 20	2 62	0·43

THE HAMPSHIRE DOWN.

Origin of the Breed.—According to the *Flock Book* (founded 1890) of the Hampshire Down Sheep Breeders' Association, the Hampshire Down "undoubtedly dates its origin from the crossing of the old Wiltshire Horned sheep and the old Berkshire Knot with the Southdowns which were introduced into Wiltshire and Hampshire early in the 19th century." The early results varied in different districts. In the north and east the progeny were dark brown, almost black on the face and ears, and possessed enormous neck muscles, a Roman nose, strong leg bones, a tendency to produce loose scurs and wool growing below the hocks and knees, with only occasional white spots on the hair-covered surface. In Wiltshire a



SUFFOLK SHEARLING RAM.
First Prize, Royal Agricultural Society's Show, 1908.



HAMPSHIRE DOWN TWO-SHEAR RAM.
First Prize, Royal Agricultural Society's Show, 1908.

larger and plainer animal, with speckled face and ears, was produced. The modern Hampshire now occupies large areas of Berks, Hants, Dorset and Wilts, while "many pure flocks also exist in Gloucestershire, Somerset, Surrey, Sussex, Kent, Herts, Cambridge, Essex, Norfolk, Bedford, and the Midlands generally. A strong point in the breed is that it is adapted for the high-lying and barren uplands of the chalk, where holdings are large, and flocks number from 1,000 upwards." Separate classes for the breed at the Royal Agricultural Society's Show were first provided in 1861.

Value for Fattening.—The Hampshire is a lower-set, more substantial, stronger-boned and somewhat coarser-looking sheep than the Shropshire. The most striking features of the breed are early maturity and suitability for high feeding and close folding on arable land. The lambs are often forced to great weights at a very early age by heavy feeding on roots and autumn sown forage crops. Ewes on the better classes of farm are often allowed 1 lb. each per day of good concentrated food until the lambs have learned to eat, when it is gradually taken from the ewe and given to the lamb. A ram lamb born in January may, with liberal feeding on green forage reach 150 lb. live weight in August. Lambs in flocks kept for commercial purposes are usually dropped in January or February, and well-bred animals will weigh up to 113 lb. at the end of May. Of this about 68 lb., or 60 per cent., will be dressed carcase. The mutton is of good quality, lean, and firm to the touch.

Characteristics of the Breed.—The head of the ram should be large but not coarse, free from horns or scurs and of a bold masculine character; the face and legs a uniform dark brown or almost black. The average weight of washed fleece is $4\frac{1}{2}$ to 5 lb. for ewes and 6 to 8 lb. for yearlings; the wool should be free from black patches and grow close up to and round the ears and over the forehead, dense and fine over the body, white when shed. The low-set ears are a good size, inclined to be thick but not coarse; more tapered than those of the Southdown, and free from light specks. The hind quarters are particularly full and well carried out, and the shoulder is exceptionally wide.

Owing to the early maturity of Hampshires, more ram lambs than older sheep are used as sires, and in addition to the rams required for service in pure flocks, large numbers are used for crossing with other breeds for the production of fat lambs.

Hampshire Down Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days	cwts. lb.	lb.
Lambs under 12 months ...	312	10 10	1 90	0.64
Wethers above 12, under 24, months.	189	22 4	2 56	0.42

THE OXFORD DOWN.

The Oxford Down breed was formed about 1830 by mating improved Hampshire ewes and a few Southdowns with Cotswold rams, the aim being "to secure the superior quality, and therefore a higher price per pound, of the mutton as compared with long-woolled sheep, and the superior weight of wool and of mutton as compared with short-woolled sheep." It was described in 1854 "as the most profitable sheep to the producer, the butcher, and the consumer."

Separate classes were provided for Oxfords at the Royal Show for the first time in 1862.

Characteristics of the Breed.—The Oxford Down Sheep Breeders' Association was formed in 1888, and the first volume of the *Flock Book* appeared in the following year, giving the distinguishing characteristics of the ram, viz., "a bold masculine head, well set on a strong neck; the poll well covered with wool and adorned by a top knot; the ears self-coloured and of good length; the face uniformly dark; the legs short, dark-coloured (not spotted); the mutton firm, lean, and of excellent quality; the fleece heavy and thick on the skin."

The Oxford is the largest and heaviest of the Downs and the wool is longer and looser and the fleece heavier than that of other Down sheep.

Distribution of the Breed.—The majority of the pure flocks are found in Oxfordshire and the surrounding counties, but in less numbers they are kept in practically all parts of England, and there are some well known flocks in Scotland. Oxfords were imported into America in 1853, and since then they have found their way into practically all the sheep-breeding countries. Apart from the demand for pure flocks, the rams are in great demand for crossing purposes—Oxford crosses carry a heavy fleece, grow to great size, and are well adapted for fattening off on turnips in winter under northern conditions.

Oxford Down rams were first introduced into the Scotch Borders about 1867 and in late years several hundred Oxford rams, practically all of which are used for crossing with Half-bred ewes, have been sold annually in September at Kelso under the auspices of the Border Union Society. The cross progeny of the Oxford ram is slower in reaching maturity than the progeny of the Border Leicester, but it can be fed to greater weights without becoming too fat.

Oxford Down Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	141	10 0	1 87	0·65
Wethers above 12, under 24, months.	123	21 19	2 66	0·44



OXFORD DOWN SHEARLING RAM.

First Prize and Champion, Oxfordshire Agricultural Society's Show, 1909.



DORSET DOWN RAM.

First Prize, Royal Counties, and Bath and West Shows, 1911.

THE DORSET DOWN.

The Dorset Down, West Country, or Improved Hampshire Down breed was brought to public notice outside its home district in 1904 by the formation of a Dorset Down sheep society and the issue of Volume I of its *Flock Book*. This was about eighty years after the present type of the breed had been established. In the last volume of the *Flock Book* there are 87 registered flocks including some 45,000 sheep.

It is a middle type of Down Sheep, pre-eminently suited to Dorsetshire. It was originally formed by mating Southdown rams with Hampshire ewes, and using the rams from the flocks thus formed to improve the original Down sheep of the West, which, it is claimed, are more ancient than the Hampshires themselves. In times past the Dorset breeders went to the leading improved Hampshire flocks for rams to secure the requisite change of blood, "with the result that the Dorset Down breed now registered, although of finer bone and often of lighter colour, is closely related to, and possesses the principal features of the Hampshire Down type, modified by local circumstances."

Characteristics of the Breed.—A good type of Dorset Down is free from all coarseness, and has a rather long, full, clean face and upper jaw, and a full muzzle. The face, ears, and legs are of a greyish-brown colour. A fine close fleece goes well down to the hocks and knees, round the cheeks, between the ears, and on to the forehead; but wool under the eyes, or across the bridge of the nose, on the ears, or below the hocks and knees, is to be avoided.

It is claimed for the breed that it is a rent-paying type, equally at home between hurdles or on the open grazing grounds upon which the flocks feed for six or eight months in the year. Dorset Downs produce small mutton of excellent quality, weighing from 66 to 72 lb. at eight to nine months old, or from 40 to 48 lb. as sucking lamb at ten to twelve weeks. The average fleece in a ewe flock is about 5 lb.

Dorset Down Classes at the Smithfield Show, 1908-1911.

Class.	Number of animals in Class during the 4 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
Lambs under 12 months ...	45	mths. days. 10 10	cwts. lb. 1 69	lb. 0.58

THE DORSET HORN.

The Dorset Horn is a pink-nosed, white-faced horned sheep, possessing striking characteristics, and is highly popular in circumstances for which it is suited. Apart from flocks scattered widely over the country, "the chief home of the leading Dorset Horn flocks is now in the southern and western parts of the county, with Dorchester as the centre, and in the Isle of Wight, where very old established and extensive flocks are kept." Owing

to its resemblance, in some respects, to Welsh Mountain sheep, a Welsh origin has been claimed for it. The name of the breed for many years was the Dorset and Somerset Horn, but the shorter name was adopted by the Dorset Horn Sheep Breeders' Association established in 1891.

Characteristics of the Breed.—Dorset Horns may be regarded as a semi-mountain type, and they thrive well on grassy hills and inferior pasture which would be too poor for many other lowland sheep. They, however, respond well to better treatment and do excellently on arable land or where "house-fed" as when kept for producing early lambs in Northern Counties. They are hardy active sheep, somewhat long-bodied, but possessing fair symmetry and style. The head is well carried and the horns of both rams and ewes are strong, with uniform and graceful curves.

The wool covers the crown and comes close up round the horns and ears and on to the jaws, and forms a dense tuft on the forehead. The wool is closely set, dense and level on the surface. Shearing generally takes place in June, when both lambs and ewes are shorn. The lambs give from 2½ to 3 lb. of wool, ewes 5 to 7 lb., and yearling rams 10 to 14 lb. The wool of the lamb is specially valued. The Dorset Horn usually shares with the Ryeland breed the premier awards for fine short white wool at the Annual Show of the Royal Agricultural Society of England.

One of the special features of the breed is the fact that the ewes come in season as early as April or May and can consequently breed "house lamb" for Christmas, weighing 10 to 12 lb. per quarter at 10 to 12 weeks old. They will take the ram again soon after lambing, and are thus able occasionally to produce two crops of lambs in a year, although the practice is not one to be recommended. When lambs are bred from cast ewes (often by a Down ram producing hornless grey-faced crosses) the mothers are fattened off with the lambs and weigh when fat from 22 to 28 lb. per quarter.

For crossing purposes the ewes are more widely used than the rams but to some extent the rams are used for crossing with Welsh, Hampshire Down, and other ewes.

Dorsets have been introduced in great numbers to the United States and Canada, and also to New Zealand and South Australia, where they are popular and widely distributed on account of their prolificacy and excellent grazing capabilities, which fit them for open country and somewhat inferior conditions.

Dorset Horn Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
Lambs under 12 months ...	27	mths. days. 11 10	cwts. lb. 1 88	lb. 0.58



DORSET HORN EWES.

First Prize, Royal Agricultural Society's Show, 1906.



RYELAND TWO-SHEAR RAM.

First Prize, Royal Agricultural Society's Show, 1907.

THE RYELAND.

The Ryeland breed is believed to be named from a poor sandy district in the southern part of Herefordshire.

Origin of the Breed.—"It was originally a small but very hardy white-faced, polled breed, with a light fleece of not more than 2 lb. of wool, growing close to and sometimes covering the eyes, but possessed of a degree of fineness unequalled by any other British breed," which, with a strong resemblance to the Merino, "led to the supposition that the Ryeland was of foreign extraction." Herbert, writing of the early times of sheep husbandry, said that the Ryeland predominated through the Western Midlands, but that in the course of time the breed was gradually displaced by a heavy sheep over the greater part of the counties other than Hereford. The Ryeland strongly resembled an early variety of the Shropshire, not only in wool, but in "a striking similarity of form and appearance." It is on record that "the Ryelands were also crossed, and that to a very considerable extent, with Leicesters, but at great sacrifice of the fineness of the wool." The main change in these respects was brought about between 1800 and 1828.

Characteristics of the Breed.—Size and wool-producing properties have been introduced into the breed without materially injuring the hardiness of the sheep or the quality of the mutton. It suffers little from foot-rot, and thrives on tracts of cold, damp soil growing inferior herbage. So much of the initial fine quality of the wool has been maintained that it usually carries off the premier prize in its class at the Royal Show, or it shares the honours with the wool of the Dorset Horn Breed. The wool is of good deep staple, and thickly set on the skin.

The symmetry of the breed is excellent, and the handling especially good at the junction of the neck with the trunk. The white of the face and legs is dull, in place of the "china" white of the Cheviot and Border Leicester.

The Ryeland ram is an impressive sire, and is in favour for producing fat lambs by Ryeland ewes as well as by ewes of other breeds. Many flocks were replaced by the Shropshire and other Down breeds, but the tendency in recent years is to an increase of numbers, as may be gathered from the increase of flocks to over 100 from 30 in 1903.

Well-bred Ryeland wethers at a year old average 70 to 80 lb. of carcase, old ewes up to 100 lb. In a good flock the fleeces will run about 5 or 6 lb. though if the lambs are not shorn the average may be about 8 lb.

Ryeland Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
Wethers above 12, under 24, months.	90	mths. days. 20 16	cwts. lb. 1 87	lb. 0.32

THE KERRY HILL (WALES).

The Kerry Hill breed derives its name from the Kerry Hills in Montgomeryshire, although flocks exist in Radnor, Hereford, Salop, Worcester, Denbigh, Brecon and Cheshire. The foundation stock of the Kerry Hill breed was described in the *Agricultural Survey of Wales* 100 years ago as the only sheep which produces true wool, that of every other Welsh breed being more or less mixed with kemp.

About 1840 these sheep were larger and heavier-woolled than the pure Welsh sheep, had nice heads, with white faces and legs, but in many cases speckled with small black spots; or they had self-coloured tan-faces, with legs to match, fine wool on the body but very coarse below. For many years progressive farmers bought rams at Knighton fair; these were Clun Forest sheep with the slightest possible amount of cross, and that only with the Shropshire. Under this system the Kerry Hill took about 25 years to evolve, and in turn was drawn upon for the regeneration of the Radnor breed. For the last 50 years little foreign blood has been introduced and improvement has been effected by selection.

Distinctive Characteristics of the Breed.—The face, ears and legs are speckled black and white, the black being not pure but more of a dark grey. The head is covered with wool between the ears and on the jaws; and a bunch or tuft of wool appears on the forehead. Generally the sheep are hornless, but small horns in rams are common though they are regarded as objectionable. The tail is long, large and fleshy, with plenty of wool right to the tip.

The fleece from ewes and wethers varies from about 4 lb. to 8 lb. and in the best flocks the wool is almost equal in value to that of Shropshires. The average fleece however has a little kemp in the breech and fetches less than Shropshire wool.

The Kerry Hill sheep of the present day cannot be regarded as a purely mountain sheep, but it certainly inherits much of the hardiness and quality of flesh of its hill ancestors and combines them with size and weight not inferior to that of some purely Lowland breeds.

The ewes are easily kept, are good mothers and the drafts are in great favour in many of the grazing districts of England for producing fat lambs. Kerry Hill rams are also used to a considerable extent for crossing with Welsh Mountain ewes for the same purpose.

The present Flock Book Society was established and the first volume of the Flock Book published in 1899. Since then the breed has been developed to a great extent and extensive exportations of breeding stock have been made to both Africa and America.

The full designation Kerry Hill (Wales) was adopted in order to prevent confusion with Kerry, Ireland.

Kerry Hill Classes at the Smithfield Show, 1908-1911.

Class.	Number of animals in Class during the 4 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
Wethers above 12, under 24, months.	57	mths. days. 20 14	cwts. lb. 1 108	lb. 0.35

THE CLUN FOREST.

The Clun Forest breed, although related to, differs from the Kerry and Radnor breeds. Its main centre is the Clun district of Shropshire. The original sheep was small and speckle-faced. The modern type was produced by crossing it with rams of the hardy black-faced Longmynd breed, now extinct, and latterly with Shropshires. It now contains so much Shropshire blood that it may be classified as a hardy variety of that breed, specially adapted to suit its own locality. The ewes are excellent mothers.

THE WESTERN, OR WILTSHIRE HORNED.

The Western Sheep is an improved and modernised remnant of the old white-faced, long-tailed, horned Wiltshire breed, described by Low as the "largest of the fine-woolled sheep of England. Its fleece was not only light (about 2½ lb.) but its belly was destitute of wool," a condition attributed to the warm, dry, chalky soil of the area. Like the original Hampshire breed, which it strongly resembled, it was rapidly supplanted or obliterated by crossing with the early-maturity and symmetrical South Down. A number of farmers in the neighbourhoods of Aylesbury, Bucks, and Northampton keep small flocks, the largest numbering about 60 ewes.

Characteristics of the Breed.—The outstanding peculiarity of the Western sheep is that it produces a very small quantity of wool which usually falls off in April or May from old sheep, and from lambs in July, leaving the skin as bare as if it had been shorn. It then somewhat resembles a newly-shorn Dorset Horn, although its horns rise much higher from the crown, and do not curve so closely to the face. It may also show grey round the muzzle, and numerous black spots on the pelt.

Owing to the difficulty of procuring fresh blood among the small numbers of sheep now representing the pure breed, some farmers have crossed their flocks with Dorset Horn rams. Rams of the Western breed are in request for crossing with all kinds of ewes to produce fat lambs. They are used to a great extent in North Wales with the draft mountain ewes, though in recent years they have had to face the competition of Southdowns and Kerry Hills.

MOUNTAIN BREEDS.

The mountain sheep are distinguished by their hardiness (which includes not merely the power to withstand severe climates, but the ability to live and thrive on very poor food and to find that food when it is thinly distributed over very large areas), activity, small size, and extremely high quality of mutton. The majority are provided with horns, though in some breeds the ewes are hornless and in others both sexes are polled. The wool, like the size, varies according to the conditions under which the sheep are kept. As a rule it is coarse, with more or less kemp, but when the sheep are kept under more favourable conditions it becomes finer and softer. The chief mountain breeds are the Blackface, with the allied Lonk, Derbyshire Gritstone, Rough Fell, Swaledale, Limestone and Penistone, the Cheviot, Welsh Mountain, Herdwick, Exmoor Horn, and Dartmoor, though the last-mentioned in many respects approaches the Longwool type.

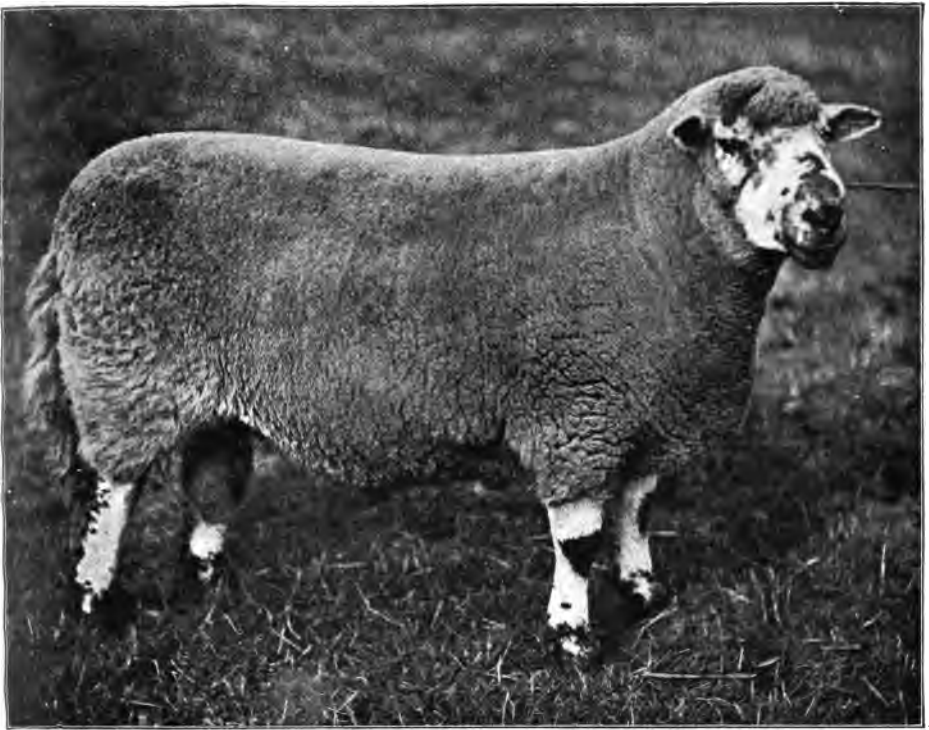
Mountain sheep in their native habitat are naturally slow in maturing and in fattening, but as a rule the lambs, when brought down to lower ground and better food, fatten quite readily. The ewes are almost without exception good milkers and mothers, though not remarkable for great prolificacy, which would be undesirable in view of the general inferiority of the food. The draft ewes are generally taken to lower ground and crossed with Longwool or Down rams, often with a view to producing early fat lambs, in which case both lambs and ewes are sold fat early in summer.

True Mountain breeds are probably very rarely permanently modified by crossing with Lowland or less hardy sheep. Such crosses may do well enough for a time, but sooner or later comes a hard season, or succession of hard seasons, which weeds out, either directly or indirectly, all except those whose constitutions have been fitted by generations of natural selection to withstand the particular local combination of adverse conditions.

BLACKFACED MOUNTAIN BREEDS.

This group of allied breeds was referred to by Professor Low as the Blackfaced Heath Breed, and was classed as having descended from the earlier Forest breed of the country. The exact origin of the race is unknown, but it is quite certain that it has existed much as it is to-day for centuries, and it seems probable that the Pennine district was its original home. The North of England is still one of the chief centres for Blackfaced sheep, though owing to greater attention having been paid to the breed north of the border and the greater numbers kept, a more distinct and uniform type has been evolved there, and the specific term "Blackface" is usually associated with the Scotch or Highland branch of the family.

Low located the habitat of the Blackfaced Heath Breed in the following words:—"It is chiefly found in the most northerly divisions of the chain of rugged heathy mountains from the high lands of Derbyshire on the south, to the confines of Scotland in the North. The breed extends across the Vales of Kendal and Eden to the higher mountains of Cumberland and Westmorland on the



KERRY HILL RAM.

First Prize, Royal Agricultural Society's Show, 1910 and 1911.



SCOTCH BLACKFACE SHEARLING RAM, "ST. COLUMBA."

First Prize Shearling at Dublin and Belfast Shows 1909.

West, and by the Carter Fell into Scotland, where it occupies the great range of Greywacke Hills stretching from St. Abb's Head on the East to the Irish Channel, through the upper part of Lanarkshire into Argyllshire, and all through the Highlands of Scotland, from the Grampians to the Pentland Firth. It has spread to all the Hebrides, and even to the Islands of Orkney and Shetland." The Heath breed described by Low in 1842 and by Youatt in 1837 is now represented by several breeds with distinctive characteristics developed by selection and differences of environment.

THE SCOTCH BLACKFACE.

Origin of the Blackface.—Youatt favoured the tradition which assigns a foreign origin to the Blackface breed, and which suggests that it was taken to a royal farm in the forest of Ettrick by James IV. Low expressed the more probable view that it found its way into Scotland from the mountains of the North of England. It has been (he added) for an unknown period, in all the high lands of the counties of Dumfries, Berwick, Roxburgh, Selkirk, Peebles, Lanark, and adjoining districts. Its introduction into Argyllshire and the Central and Northern Highlands, has been of very recent origin, about the middle of the Eighteenth Century, when sheep began to supersede black cattle.

Characteristics of the Breed.—Ayton, in 1824, said of them :—“This breed of sheep is the boldest, the hardiest, and the most active and industrious of all the sheep species. They are so round of their bodies, so compact in their figures, and short-coupled; that they are often denominated the Short Sheep” (in contradistinction to the “Long” or Cheviot Sheep).

The following are the modern points of the breed :—The face and legs are black or mottled (distinctly clean, and free from dun or brown), smooth, and glossy. Dark faces are in favour with breeders of cross-lambs, which bring higher prices when dark. Wool should not appear among the hair, although a slight tassel on the forehead and fringes on the cheeks and legs may have to be dressed off well-bred sheep for showing. The nose is strong, broad, and prominent, and the nostrils are wide and black. The horns of the ram are large, coming out level from the crown and taking one or more spiral turns according to age. The short ears are hidden by the horns of the ram. The tail is not docked, being naturally short—reaching only to the hocks.

Value as a Meat Producer.—The mutton at all ages is of the very highest quality and is always in great demand in the leading markets. Preference used to be given to the mature mutton of three to five-year-old wethers, weighing 15 to 16 lb. per quarter, but at the present time old mutton is not so much in demand, and the majority of wether lambs are now fattened off in their first autumn or winter. Although lambs direct from their mothers, weighing 25 to 30 lb. of dressed meat, are the tenderest and sweetest, the highest-priced mutton in the market is that produced by Blackface wether lambs weighing about 36 lb., that have been fattened on good foggage or aftermath after weaning.

The Blackface Sheep is wild and active, and, to thrive well on natural pasture, must have a good range; nevertheless, it bears

house-feeding well, both in the case of ram lambs for breeding and of cast ewes being fed fat.

Character of the Wool.—The wool is wavy, loose and shaggy, nearly touching the ground; much stronger and more hairlike and kempy than Cheviot wool. It is mostly used in carpet-making, and large quantities of it are exported to the United States for this purpose. The fleece averages $3\frac{1}{2}$ to $4\frac{1}{2}$ lb. for ewes, up to 5 lb. for the best mountain ewe flocks, and 7 lb. for wethers. Black or blue spots on the neck, tail, or other parts of the wool-producing part of the skin are objectionable.

An exceptionally strong-woolled variety of the breed has been developed during the last 35 years by Mr. Charles Howatson, of Glenbuck, and other breeders following his lines; and sheep of this strain, receiving a liberal supply of food, produce immense fleeces. During recent years it has come to be widely believed that the development of long strong wool has been carried too far; especially when associated with the fashionable short-legged Show-yard Sheep it is a serious disadvantage in snow and a danger to the first lambs of young ewes, as they may fail to find the mother's teats. The advocates of fine wool do not want a short dense coat like that of a Cheviot sheep, but a thick-set mellow wool, of good length and as uniform as possible all over the body. Sheep continue to yield heavy fleeces of this class of wool when they are aged. The ram lambs are usually wintered under cover, and do well if not over fed.

Crossing.—The older ewes are taken to lower grazings and crossed with Longwool rams. In Scotland the Border Leicester is almost exclusively used, the resulting progeny being known as "Cross" lambs; in the North of England and to some extent in the South-West of Scotland Wensleydale rams are also favoured, the lambs being called "Mashams" or in Scotland "Yorkshire Crosses." Both these crosses are bred in large numbers and are either sold as fat lambs or as stores to be fattened off in arable districts in winter. The Border Leicester produces a quicker growing, better backed, and more easily fattened lamb, but the Wensleydale crosses can be fed to greater weights without becoming too fat and the mutton is of higher quality.

There is no Blackface Flock Book, but every breeder keeps careful records and the Blackface Sheep Breeders' Association looks after the interests of the breed.

Blackface ("Mountain") Sheep at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	132	7 24	1 15	0.54
Wethers above 12, under 24, months.	129	20 4	1 86	0.32



BLACKFACE EWE AND LAMB.



LONE RAM.

First Prize, Royal Agricultural Society's Show, 1909.

THE LONK.

The Lonk Sheep is a native of the wet hill districts of East Lancashire, West and South West Yorkshire and North West Derbyshire. It resembles the Blackface, but is longer in the leg and longer and bigger in body and head. The face is black with clear white markings, a deep strong jaw and a Roman nose. The set of the horn of the ram is rather different from that of the Blackface, being more on edge, and the wool comes closer up to the horn, but the face and legs should be free from wool, except a small tuft on the forehead and a little fringe on the back of the hind leg. The tail is rough and long, almost touching the ground. It has a closer, finer and heavier fleece than the Scotch sheep, but is not quite so hardy.

The ewes generally remain out on the open hills except at lambing time and in very rough weather when, if possible, they are brought down to the lower hill grazings, and a little hay is given if absolutely necessary. Lambing takes place in the enclosed pastures and meadows.

Ewe lambs and any wether lambs that are to be kept on for shearlings are usually sent for the first winter into the lowlands of Lancashire, Cheshire and Derbyshire. A great number of wether lambs are sold fat in August and September, the remainder run on till the following autumn and produce exceptionally fine lean carcasses of about 60 to 80 lb. The draft ewes are sold to go to lower farms where they are crossed with either Longwool or Down rams. Wensleydales and Leicesters are the commonest crosses, but Hampshires and Oxfords have also been tried with good results.

The Lonk Sheep Breeders' Association and Flock Book Society brought out the first volume of the *Lonk Sheep Flock Book* in 1905.

THE ROUGH FELL SHEEP.

The Rough Fell Sheep, one of the hardiest of the Black-faced breeds is found in considerable numbers on the moors and hills of North West Yorkshire, parts of Westmorland and adjoining districts. It is smaller than the Lonk, its wool is stronger and coarser and altogether it is more like the unimproved variety of the Scotch Blackface. The face may be black with or without white markings, but a black face with grey muzzle is preferred. In other characteristics and in the conditions to which it is subjected the breed closely resembles the Scotch Blackface. Being extremely hardy and good milkers, the ewes produce excellent cross-lambs by Long-wool rams when brought down to lowland pasture, the favourite cross being that with the Wensleydale.

No Flock Book is kept.

THE SWALEDALE.

The Swaledale is a valuable hardy mountain breed kept on the hills adjoining the dale and extending westward to the Pennines and into Westmorland.

The face is black or dark grey, with a mealy nose ; the legs are mottled. Swaledales are not so well woolled in front as the Scotch Blackface, but they are larger and longer. The face is not so strong, and the tail is long like that of the Lonk. Compared with the the Scotch sheep they grow a shorter-stapled, closer wool of finer quality except on the breeches, where it is long and coarser, and gives the appearance of lightness in the fore-quarters. A good fleece, slightly coarser than that of the Lonk, averages about 5 lb. for ewes and tegs, and is used for similar purposes.

Swaledale sheep are increasing in number ; they are good grazers, and it is claimed that they are better milkers, produce better and fatter lambs, and fatten more readily than Scotch Blackface ; but the Scotch crosses are superior to them in quality of head and in darkness of face. To preserve their hardness, they only receive hay in severe weather in spring. Lambing begins, as in the Scotch mountains, about the middle of April. The ewes are crossed with Wensleydale rams after three or four crops of pure lambs have been taken.

No Flock Book is kept.

THE DERBYSHIRE GRITSTONE.

The Derbyshire Gritstone or Dale-o'-Goyt breed was promoted to a position of prominence in October, 1906, by the formation at Bakewell of the Derbyshire Gritstone Sheep Breeders' Society. The name indicates the geological formation on which they have been bred pure for more than 100 years in the bleak hills and dales of the Peak of Derbyshire. The breed is dark or mottled on the face and legs, and the Society encourages breeders to keep the black very prominent, brown faces not being regarded as characteristic of the breed. The wool is close and fine, and brings a good price, notwithstanding the occurrence of black patches, especially from about the belly, thighs, and rump. The ewes are splendid mothers, and the lambs feed quickly into the finest mutton, not over fat.

Unlike the other descendants of the old Heath breed, the Gritstones are hornless.

THE LIMESTONE.

The Limestone breed was an interesting breed which has, however, become almost if not quite extinct. Its habitat embraced about eight parishes or townships on the dry limestones of the lower districts of Westmorland, only a few townships being in the higher parts of the county.

The breed was horned, very hardy and active, and the face, legs, and wool were white. The ewes were very prolific, and they resembled the Dorset Horned sheep in coming into season earlier than most other breeds and have been known to give two crops of lambs in a year.

THE PENISTONE.

The Penistone breed is nearly related to the Limestone, having well developed horns and a long, white or light grey, face, although



ROUGH FELL RAM.
First Prize, Kendal Show, 1908.



SWALEDAL RAM.
First Prize, Kirkby Stephen Show, 1910.

in some respects it resembles the Lonk. It may be seen, in small numbers, on the borders of Yorkshire, Lancashire, and Derbyshire, near Penistone. At one time it extended to a much wider district. The most singular characteristic is the length and muscularity of the tail.

THE CHEVIOT.

The name is derived from the rounded green hills on the Scotch and English Borders, which are the native home of the breed. Throughout Scotland, Cheviot ewes are generally kept on the green hills, while Blackface ewes occupy the higher, black or heathery land. The original unimproved Cheviot was a very close-coated, short-woolled, remarkably hardy sheep—even more hardy, it is recorded, than the Scotch Blackface. Many had a slight yellow tinge on the hair of the head and legs, after the colouring of the old hardy Tanfaced sheep which seems to have occupied many of the sheep-grazed parts of Scotland, and which was probably very similar to the Tanfaced Mountain Sheep of Wales. How the early Cheviot was developed from this old breed is not clear, though it is sometimes suggested that crosses with Leicesters or Lincolns were made. The following description of the Cheviot sheep is condensed from the first volume of the Flock Book issued in 1893 by The Cheviot Sheep Society (formed 1891).

Characteristics of the Breed.—"The Cheviot tup at maturity weighs, when fat, at least 200 lb. live-weight. He should have a lively carriage, bright eyes, and plenty of action. His head should be medium in length, well covered with short, fine, white hair; his ears nicely rounded and not too long (well up from the eye), and rising erect from the head (drooping or low-set ears or narrow ones, 'hare-lugged,' are decidedly faulty); nose arched and broad, and nostrils black, full and wide open; neck strong, but not too long; ribs well sprung and carried well back towards the hook bones—(a long weak back being about the worst possible fault); the tail well hung and nicely fringed with wool; the legs broad and flat, covered with short, hard, white hair; the fleece weighing 10 lb. to 12 lb. of fairly fine, densely grown wool of equal quality, meeting the hair at the ears and cheeks in a decided ruffle. Bareness there, at the throat or near the forearms, near the hocks or below the body, or coarseness about the breeches, is a decided blemish. A hill flock of ewes should clip, on an average, $4\frac{1}{2}$ lb. each, of fine (washed) wool, stiff, straight, dense and not too short. Hard feeding makes it stronger. The Cheviot should live and thrive well on the poorest keep, and when taken to the lower ground grow larger, and in time become fat."

Horns on the ram, once thought to be a sign of hardiness, rarely occur now and are out of favour with modern breeders.

The tail is cut long, at the hock, and protects the udders of breeding ewes on the hill sides. All lambs on lowland pastures and intended for feeding on turnips are docked short to keep them clean.

Cheviot sheep supplanted the Highland Cattle in the North of Scotland, and also a great many Blackface Sheep which had

preceded them in displacing the black cattle in the Southern Highlands of Scotland. At the present time next to the Border districts the most important area for the Cheviot is the North of Scotland—Sutherland and Caithness.

Many Cheviot ewes are sent, when about five years old, to lowland grazings in both England and Scotland, to breed lambs for the fat market or to fatten into tegs. The most important cross is that with the Border Leicester giving the well-known Half-bred (*see* p. 76). Cheviot wether hoggets are in high favour with butchers on account of the excellence of the quality of the mutton and the great size of the gigot or “leg of mutton.”

Compared with most other Mountain breeds the Cheviot is distinguished for its weight, comparatively early maturity and above all for its quality of wool.

Cheviot Classes at the Smithfield Show, 1902–1911.

Class.	Number of animals in class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwts. lb.	lb.
Lambs under 12 months ...	99	7 28	1 27	0·58
Sheep above 12 months ...	102	19 25	1 110	0·37

WELSH MOUNTAIN.

So far as is known a hardy race of Mountain sheep has always existed on the highest Welsh hills. From time to time introductions of other breeds—notably Cheviot and Blackface—have taken place, but have been marked by no great success, and it is probably safe to assume that the breed retains its original characteristics almost unchanged, except so far as modifications have been made by selection within the breed. On the low richer ground, ewes which are crosses with larger, earlier maturing breeds such as Wiltshires, and Leicesters, are found, but these are always regarded as crosses and are not to be confused with the Mountain sheep. Other breeds, such as Kerry Hill and Radnor, are Welsh in origin, but are quite distinct from the Welsh Mountain, which is kept pure and fairly uniform in type on practically all the higher mountains throughout Wales, particularly in the north.

Characteristics of the Breed.—The Welsh are small, very hardy sheep, with a rather long and narrow body somewhat light in the fore-quarters, and short, fine, thick wool. Both pure white and slightly tan faces and legs are common, but the latter colour is the more usual and is preferred as an indication of hardiness. For the same reason a little kemp in the wool is not objected to. Lambs at birth usually have a well marked dirty yellow patch on the back of the neck, but this disappears in a short time.



DERBYSHIRE GRITSTONE RAM.

First Prize, Royal Agricultural Society's Show, 1911.



CHEVIOT TWO-SHEAR RAM.

Champion in Cheviot Classes at the Royal Agricultural Society's Show, and the Highland and Agricultural Society's Show, 1908.

70 7941
ABSTRACT

Rams have strong curved horns, though of a much softer and more waxy appearance than the dark ringed horn of the Blackface, and they curve out more from the head. Ewes are hornless, while wethers have short horns only a few inches long and merely curving backwards and outwards. The sheep are more active and restless than even Blackfaces, and few fences can restrain them for any length of time.

The mutton is of the highest quality and on the London market is classed with that of the Blackface and Southdown. As in the case of most mountain breeds, wethers used to be kept for three or more years and sold to the butcher off the mountains, but with the lower price of wool and the demand for younger mutton a large number of wether lambs reared on the mountains are sold as stores and fed off on low ground in their first winter. The pure bred carcase as a rule averages about 30 lb., but those of sheep reared and fed on lower ground will attain 50 lb. and more.

Welsh ewes are good mothers and milkers, and the old ewes are used in great numbers for rearing fat lambs on the lower ground. For this purpose they are crossed with Wiltshire, Southdown, Kerry Hill, Leicester, Border Leicester, Dorset, Ryeland, Shropshire, and other rams. The Southdown cross gives an almost perfect carcase though it is rather small. Great numbers of draft ewes are sold to go to the Midlands for this purpose.

In average flocks, fleeces run about 2½ lb. for ewes and 3 to 5 lb. for rams. The sheep are usually kept on the open mountains from May till November, but are brought down to lower ground for the winter.

The Welsh Mountain Sheep Breeders' Association and Flock Book Society was formed in 1905 and the first volume of the Flock Book appeared in 1906.

Welsh Mountain Classes at the Smithfield Show, 1902-1911.

Class.	Number of animals in class during the ten years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
Wethers any age 	90	mths. days. 20 21	cwts. lb. 1 18	lb. 0·21

THE RADNOR

The Radnor breed had the Welsh Tan-face sheep as a foundation stock. It is now a short-legged hardy little sheep (smaller than the Kerry Hill, which in some ways it resembles) with a close fleece of fine wool on the back and sides, rather coarse underneath, and speckled faces and legs, though some few retain the tan colour. Very few of the genuine old Radnor sheep remain, as the breed has been crossed so much with Kerry Hills and Shropshires. Some retain their hardy hill characteristics, others are softer and pasture only four summer months on the mountains.

THE HERDWICK.

The Herdwick, the hardiest and one of the most peculiar of British Mountain sheep, is found in the Fell districts of North Lancashire, Cumberland and Westmorland.

Tradition ascribes their origin to "forty small sheep which managed to save themselves from the wreck of a Spanish vessel stranded [about the time of the Armada] on the sandy coast of Drigg, and were claimed for flotsam and jetsam by the then lord of the manor." If this really was their origin it can only be said that, as a sceptical writer puts it "they picked their country well," for they are peculiarly well adapted for their district, and every attempt to introduce other breeds to it has failed. The vessel has also been claimed as Norwegian and the wrecked sheep as Scotch, and the date fixed about 200 years ago. All attempts to improve the breed by crossing have failed.

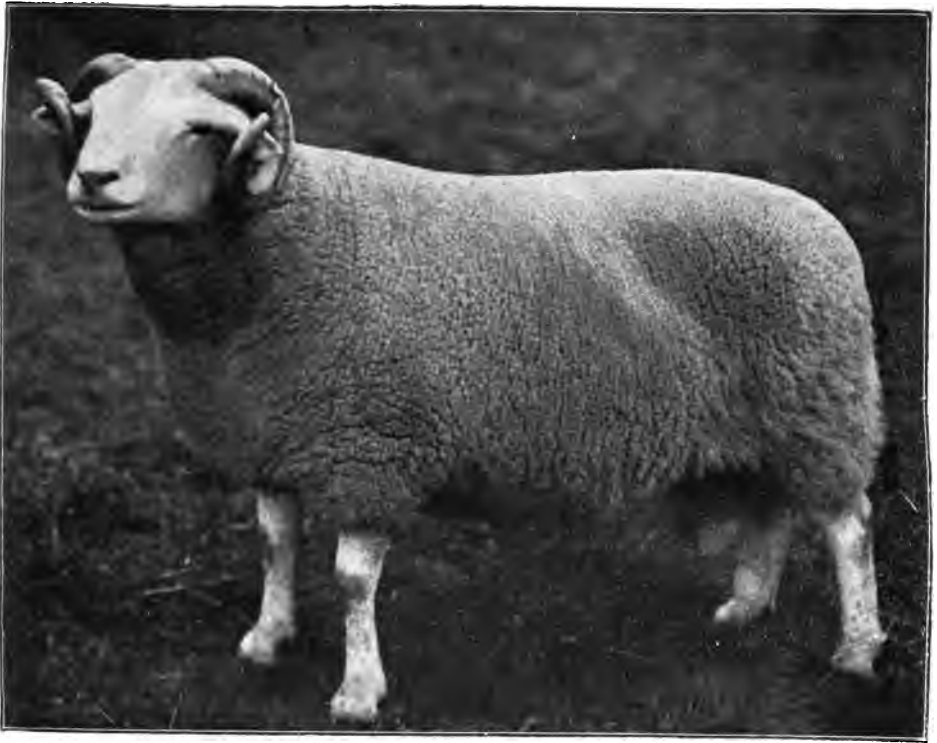
The colour of the head and legs of the lamb when dropped should be a blue black, with a shade of grey through it, but free from any tinge of brown or speckle; the body, white, or preferably grey; white tips to the ears; and a fringe of white hair round the hoofs. The white extends from the starting points indicated, and forms rings which gradually develop round the muzzle and limbs, till, at four years of age, the face and legs are left either white, like the hoofs, or steel-grey in colour.

Distinguishing Characteristics of Herdwick Sheep.—Horns in the ram (the ewes have no horns), should be smooth and not too thick, coming out of the head well apart and well back; the face a light "rag" (grey) or white in full-grown sheep, with plenty of white bristles on the back of the head, and a "toppen" of moderate size on the forehead. The neck and head should be carried gaily, rising well from the shoulders, which are usually sharp at the withers, although a broad shoulder is preferable. The fleece should be genuine wool, not hair, the staple strong, with a mane standing well up round the shoulders and down the breast; the wool a good length on other parts, and knit together with a lash on the top.

A little kemp in the wool when a sheep gets to six years old indicates true Herdwick character. The animal should walk freely and be square on his limbs in travelling to and from an observer, and have a good thick tail. The best sheep when turned up are grey below, and they are none the worse for being grey all over the body—showing a grey pelt after shearing.

Ewes clip about 3 lb. of wool, hogs and wethers 4 lb. or more, and rams 7 or 8 lb. Ewes do best when they lamb for the first time at three years old. Hogs from some farms are wintered in the low country at a cost of 5s. to 5s. 6d. each, but on very high exposed places they are hardier and do better afterwards, if wintered at home on hay.

Herdwick mutton is of very high repute for sweetness, grain, and proportion of lean, and recent trials have shown that the young hogs will respond well to good feeding on low ground. Draft ewes are frequently mated with Border Leicester, Leicester, or Wensleydale rams for their fourth lambing. Any of these crosses produces lambs of high quality for the butcher, or cross ewes that



WELSH MOUNTAIN RAM.

First Prize, Royal Agricultural Society's Show, 1911.



HERDWICK RAM.

First Prize, Royal Agricultural Society's Show, 1907.





EXMOOR HORN RAM.
First Prize, Royal Agricultural Society's Show, 1911.



prove prolific and good nurses on the better keep of the lower ground.

On Black Hall Farm, at the head of Duddon Valley in Cumberland, Herdwick ewes are from time to time found with 14 ribs on each side, or 14 on one and 13 on the other, in place of the normal number, 13 on each side.

THE EXMOOR HORN OR PORLOCK.

The Exmoor Horn or Porlock Sheep, one of the chief descendants of the old Forest breeds, has existed from time immemorial on the Exmoor and Brendon Hills in West Somerset and North Devon.

It is a hardy race, adapted to the poverty of the natural pasture. The modern sheep has a black muzzle, white face and legs, tapering horns, curving downwards and outwards; close-set, long-stapled fleece averaging 5 lb., with wool up to the cheeks, carcase peculiarly rounded, broad loins,—though with slack girth behind the shoulders—and a high neck, with a bold, active habit.

The hill flocks are usually placed on the lower ground of the farm to lamb, and get a few turnips and oats; after summer grazing, they come in from the hills in November to the poorest enclosed lands. The ewes lamb first at two years old, and are good mothers. They are drafted, after three crops of lambs, to go down into the low country. The Exmoor Horn Sheep Breeders' Society was formed in 1906, to look after the interests of the breed at home and abroad, and the first volume of the Flock Book was published in 1907.

Exmoor Horn Classes at the Smithfield Show, 1909–1911.

Class.	Number of animals in Class during the 8 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
Wethers above 12, under 24, months.	21	mths. days. 20 13	cwts. lb. 1 57	lb. 0·27

THE DARTMOOR.

The Dartmoor is the largest hill or moorland sheep in this country. The size has increased, and the quality of wool has gone up in recent years by careful breeding and selection, until at the present time the breed has many of the characters of a Longwoolled breed.

The flocks winter on grass and a little hay; only show sheep get corn or roots. The ewes lamb about the end of February or beginning of March, but few breeders attempt to rear fat lambs, though cast ewes go to small farms favourably situated, and, being excellent milkers, produce fine fat lambs by Down or South Devon rams, while fattening themselves for the butcher. Fat wethers go off at 1½ and 2 years old, weighing 20 to 24 lb. per quarter.

Characteristics of the Breed.—The breed is hornless, but occasionally a ram develops backward-pointing horns a couple of inches long. The head is large and well proportioned, the ears of good medium size, covered inside and out with hard hair showing black spots, and set on about level, so that the inside can be seen by an observer as the animal looks at him. Dun on the face is a fault, but black spots of hair on black skin, deepening in the neighbourhood of a black muzzle, and also round the eyes, are characteristic.

The wool—often 15 inches long—beautifully fine in quality, and very strong when tested by breaking, resembles that of the Devon Longwool in staple, but is finer, more wavy and curly, and more even in quality all over the body. It extends over the poll and down to the knees and hocks, and a little on the hind legs. In the best flocks the fleece averages 10 or 12 lb. for ewes, and the skin underneath is a “bright red” or clear pink colour.

THE OLD NORFOLK HORNED.

The Old Norfolk Horned breed is represented by a remnant distributed among some four small flocks. It is one of the original parents of the Suffolk, and of the same general type as the Blackfaced Heath breed, although, owing to its location on light chalky soils in a dry climate, the wool is silky and not abundant. The successful competition of Merino wool led to the breed becoming almost extinct, although it was long the prevailing breed of Norfolk and Suffolk. The South Down drove it first out of the low country to the higher land of Norfolk, Suffolk, and Cambridge. Low says “they were noted for hardiness and robustness, great length of limbs, and too great wildness of temper. They hold their long necks erect, and their carriage resembles that of an antelope.”

The breed has been enormously improved in symmetry by selection and in-breeding, and it now claims remarkably handsome animals with jet black faces and legs, gay high-set expanding horns, and black-spotted bodies. The ewes are very prolific, excellent mothers, and good grazers, but they require a large range. They never suffer from foot-rot, and in the breeding flock old age is the most common cause of death. When ready for the butcher, the Norfolk sheep carries a large proportion of lean, and no other breed can show as much red meat in proportion to fat at the end of the saddle-cut, a characteristic which has been largely handed on to the Suffolk. The breed gained first prize in the carcase competition at Smithfield in 1902, and second in 1901. The drawbacks of the Norfolk sheep are that they jump like goats, are very difficult to fence, and are very slow producers.

BRITISH BREEDS OF PIGS.

Our domestic pigs are believed to be descended from the wild hog, *Sus scrofa*, crossed with refined white Chinese pigs of a different species, *Sus indicus*, and also with an earlier black offshoot of that species brought from Italy, under the name of the Neapolitan.

Pigs may be classified in various ways—Large, Medium, and Small; White, Black, and Sandy—but classification is not of such great importance as in the case of cattle or sheep. The number of breeds is small, and the differences between them, while important, are not nearly so pronounced except as regards size.

In the United Kingdom pigs are kept as producers of pork and bacon only, *i.e.*, they are never fed simply for lard production as in America.

Points of a Bacon Pig.—The desirable points in a bacon pig of any breed are, briefly, as follows :—General form fairly rectangular—though modified by the slightly greater development and weight of the hams as compared with the forequarters—long and deep, with good and uniform width. The body smooth, symmetrical, and well-balanced, supported on somewhat short but straight and strong legs set well apart and not too much under the body. Good constitution and quality as indicated by capacity of chest; active, easy carriage and freedom from coarseness in head, hair and legs. The head fairly short in many breeds but longer in others; wide between the eyes and ears, which should be fine in texture and fringed with fine silky hair, their length and carriage varying according to the breed. Jowl neat, firm, and free from flabbiness; neck fairly short, substantial towards the shoulder, but narrower at the nape; shoulder full at its junction with the neck, neat, light, and well covered with flesh, level on the top and free from hollow-ness between the tops of the shoulder blades; forelegs short, straight, strong and tapering; pasterns strong; feet comparatively short and of medium size, the animal standing firm and high on its toes. Chest low and wide; sides deep and evenly fleshed over long well-sprung ribs; back long, almost straight when the pig walks, but slightly arched when it is at rest, equally broad throughout, thickly and evenly covered with flesh; belly line straight; loin thick and wide, sustaining the width of the back; hips low, wide, and smoothly covered with flesh; rump long, smooth, the hip width carried well back, and only slightly drooping; hams wide and thick, full down to the hocks, but free from flabby fat; hind legs proportionately long, strong, and well set apart, and moved forward in a straight line in walking; skin not too thick, and free from wrinkles.

THE WHITE YORKSHIRE BREEDS.

There are three White Yorkshire breeds, *viz.*, the Large, the Small, and the Middle—the last evolved from crosses of the Large and the Small. The Small breed had a preponderating proportion of Chinese blood, and was almost perfect in symmetry, but carried too much fat, was too small and not prolific enough for a commercial pig. As a natural result it is now kept in very limited numbers and may be regarded as being of more historical interest than practical importance.

THE LARGE WHITE.

The Large White Yorkshire is found in the greatest numbers in the North of England, particularly in Yorkshire, Lancashire, Lincolnshire, and Cheshire, but it is also extensively kept in pure herds in all parts of the United Kingdom, and in the commercial stock of the country the Large White type is at least as well represented as any other.

The original Large White was a big, coarse, strong-haired, lop-eared animal, white in colour except for blue patches on the skin. It was very hardy and prolific but slow in maturing and fattening, narrow and high in the back, and long in the leg and snout.

Until the formation of the National Pig Breeders' Association in 1884, the breeding of pigs was conducted on rather haphazard lines, little attention being paid to nice distinctions between breeds, while pedigree was hardly thought of. It is therefore impossible to mention any particular steps by which improvement was effected; but while a certain amount of crossing with smaller, more quickly maturing breeds was carried out, it is highly probable that careful selection within the breed was chiefly responsible. Owing partly to their wide distribution and to their adaptability to varying conditions, Large Whites are not so uniform in type as some other breeds, but the general character is quite distinct and fixed, and when used for crossing they have great power of passing on their qualities to the offspring.

Characteristics of the Breed.—The Large White Yorkshire is one of the two largest and heaviest breeds of white pigs, the other being the Lincolnshire Curly-Coated. The young pigs grow and fatten very quickly and at the same time are hardy and able to hold their own under rough conditions, while the sows are prolific and excellent milkers. They are active but yet quiet in disposition, and graze and forage well, though at the same time there are few breeds which will bear heavy feeding better and which will give better returns for the food supplied. The head is moderately long, the face slightly dished, snout broad and (unlike that of the Middle White) not turned up. The ears are of medium size and length, thin, and fringed with abundance of fine silky hair and inclined slightly forward.

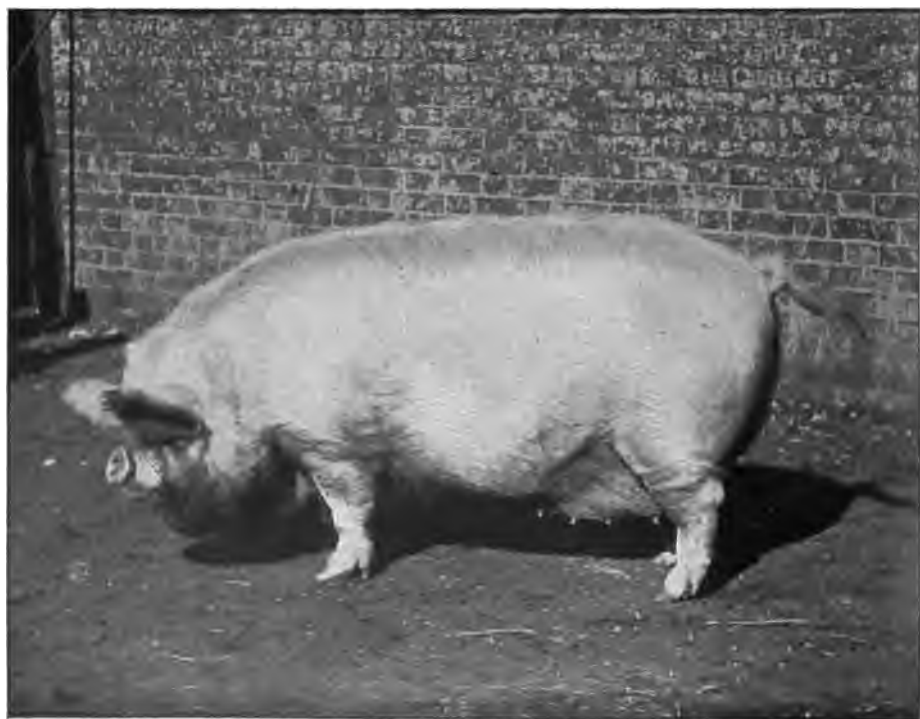
There should be a fairly abundant coat of fine white hair on a white skin. "Black hairs, black spots, a coarse coat, a coarse mane, short snout, inbent knees, and hollowness at the back of the shoulders" are all grave objections.

A full-grown boar in show condition may weigh up to about 10 cwt., while pigs at a year old weigh up to 5 cwt. The Irish Department of Agriculture has pronounced the Large White to be admirably suited to the requirements of Irish farmers, for, among other reasons, its "neat head, light neck and shoulders, good girth, and plenty of depth through the heart, well-sprung ribs, with moderate depth of side, great length of body on short legs, thick loins and stout thighs." A strong constitution, immense size, quickness of growth, and lean flesh are its characteristic qualities.



LARGE WHITE YORKSHIRE SOW, "BOTTESFORD MARCHINGTON QUEEN."

First Prize, Royal Agricultural Society's Show, 1908, 1909 and 1910.



MIDDLE WHITE YORKSHIRE SOW, "HOLYWELL LANCASTER ROSE."

First Prize, Royal Lancashire Society's Show, 1907. Champion, Tring Show, 1907 and 1908.

In late years Large Whites have been in considerable demand abroad and large numbers are annually exported to practically all parts of the world, Germany and Russia being perhaps the best customers at present.

Large White Pigs at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.		Average live weight.		Average daily increase from birth (weight at birth disregarded).
		mths.	days.	cwt.	lb.	lb.
Not above 9 months ...	88	8	22	3	32	1·39
Above 9, not above 12, months.	90	11	6	4	37	1·42
†Porkers not exceeding 100 lbs. live weight.	34	3	17	0	80	0·74
Single Pigs not above 12 months.	36	11	1	4	48	1·48

† 1907-1911 only.

THE MIDDLE WHITE.

The Middle White, though similar in colour to the Large White, is a distinct breed, and not simply a smaller variety of the same breed. Compared with the Large, the Middle Whites are characterised by shorter head, dished face, broad turned-up snout and fuller jaw; the body is shorter, thicker, and closer to the ground. They are perhaps not so prolific and do not grow to such great weights, though they often scale over 40 stones. They cross extremely well with either the Large White or the Berkshire and the crosses are excellent for bacon purposes. Early maturity is one of their great qualifications and they are well suited for furnishing carcasses for the fresh pork trade. Where early-maturing, rapid-feeding pigs to be killed at from four to eight months old are required, as particularly, *e.g.*, in connection with factories, creameries, &c., Middle Whites or Middle White crosses hold their own.

Middle White Pigs at the Smithfield Show, 1902-1911.

Class.	Number of animals in Class during the 10 years.	Average age.		Average live weight.		Average daily increase from birth (weight at birth disregarded).
		mths.	days.	cwt.	lb.	lb.
Not above 9 months ...	120	8	14	2	83	1·19
Above 9, not above 12, months.	104	11	13	3	63	1·15
†Porkers not exceeding 100 lbs. live weight.	46	3	25	0	82	0·71
Single Pigs not above 12 months.	28	11	1	3	53	1·16

† 1907-1911 only.

THE BERKSHIRE.

The Berkshire is one of the best known and most widely distributed breeds of British pigs. It was the first to be improved, and, being suitable to American conditions, it has become one of the most successful breeds in that country. Extensive exports have also been made to the Colonies and other countries, especially Canada, Australia, South Africa, the Argentine, Russia, Germany, and Brazil.

Older Types of the Breed.—The colour mentioned by Professor Low in *Domesticated Animals of the British Isles*, 1846, and illustrated in an oil painting now in Edinburgh University, was chestnut with dark patches through it. Russet spots now and then still appear on well-bred Berkshires, and the colour comes out strongly in second crosses with pigs of white breeds. The *Complete Grazier* (1805) described the breed, after it had been materially improved from the standard of the earlier records, as "Colour reddish brown, with brown or black spots, sides very broad, legs flat, ears large and pendulous over eyes, body thick, close and well made."

Modern Type.—The modern type of the breed is black in colour, with four white feet, white tip to tail, and white on face. The body is long, low, level, and deep, with a highly set tail and straight back. The head is of moderate length and dished. The ears are wide apart, fairly erect—not drooping—and fringed with hair. The legs should be strong, straight, and squarely set; the hair firm, but plentiful all over the body and free from "swirls."

The British Berkshire Society (founded 1884) has recommended to judges making awards at shows that "a perfectly black face, a black foot, a black tail, a roach back or inbent knees should disqualify a pig in the show yard, as should white or sandy spots on the top or sides of the animal, or a decidedly white ear." Boars which have only one testicle down or which are ruptured, and sows with irregularly placed or blind teats or with injured or diseased udders, are also disqualified.

William Hewer, of Sevenhampton, and the Rev. H. Bailey, of Swindon, were two pioneers in the improvement of the breed about 1862, when the Royal Agricultural Society gave it the distinction of a separate class at the Annual Show. The late Heber Humfrey was one of the most extensive breeders and exporters. He was a chief mover in founding the Breed Society, and for 20 years he compiled the Herd Book and edited its proceedings.

Characteristics of the Breed.—Berkshires would be classed as medium size pigs, and they attain about the same weight as the Middle Whites. They are distinguished by their hardiness, activity, and general quality of conformation and carcase, while they are unsurpassed as grazers and foragers. The sows as a rule are not remarkable for their prolificacy, and the young pigs are somewhat slow in growth, but as they can be kept very well and cheaply on pasture when growing, this is not such a serious defect as it might appear to be at first sight. The quality of carcase is indicated by the fact that during the past nine years in the Carcase Competition at the Smithfield Show, Berkshires have been awarded 8 Championships and 8 Reserve Championships, also 80 prizes out of a possible



BERKSHIRE BOAR, "HERCULES."



LARGE BLACK SOW, "HASKETON LONG BESS."
First Prize, Peterborough Show, 1910.

total of 111. Owing to their black skin and hair, Berkshires are comparatively unaffected by a strong sun, a very important point in their favour in many of the countries to which they are exported.

Value for Crossing.—It can safely be said that no breed of pigs has been more used for crossing purposes, and none has been found more useful for refining coarser animals.

Berkshire Pigs at the Smithfield Show, 1902–1911.

Class.	Number of animals in Class during the 10 years.	Average age.		Average live weight.		Average daily increase from birth (weight at birth disregarded).
		mths. days.		cwt.	lb.	lb.
Not above 9 months ...	204	8	19	2	102	1·24
Above 9, not above 12, months.	226	11	13	3	80	1·20
†Porkers not exceeding 100 lbs. live weight.	110	4	0	0	88	0·72
Single Pigs not above 12 months.	114	11	11	3	77	1·19

† 1907–1911 only.

THE LARGE BLACK.

The Large Black breed has only been officially recognised since the incorporation of the Breed Society in 1899, but there is ample evidence that the Large Black Pig, with its characteristic whole colour, length, fine hair, lop ear, and great grazing capacity, has existed for many generations. It was originally found chiefly in the western counties of Devon and Cornwall and the eastern counties of Suffolk and Essex, and naturally there were at first variations in the type of stock bred in such widely separated districts, but with the interchange of blood which has taken place, general uniformity has been obtained, and a definite scale of points has been drawn up by the Breed Society.

Characteristics of the Large Black.—A detailed list of points is given in the volumes of the Herd Book. The colour should be a whole black, the skin fine and soft, and covered with a moderate quantity of straight silky hair. The head should be of medium length, wide between the ears which should be inclined well forward over the face. A narrow forehead, “dished nose,” thick, coarse, or pricked ears, and a coarse or curly bristly mane are regarded as objectionable, while any colour other than black disqualifies.

Large Blacks possess great length and depth of body, width across the back, and good hams. They are rapid in growth, and the great weight to which they were formerly fed has given way to greater quality, so that they now yield at an early age a long deep-sided carcase of from 160 lb. to 190 lb. dead weight, light in shoulder, jowl and offal, showing a large proportion of lean meat and producing well-streaked bacon. Large Blacks are hardy and docile, while the natural carriage of the ears well forward over the eyes induces a quietness of habit which renders them peculiarly

well adapted to field grazing. They thrive very well on grass if allowed little additional food. In this connection their whole black colour is a great advantage as it enables them to be pastured or field-fed without suffering from sun-scald. The sows are prolific, and good milkers and mothers.

Value for Crossing.—Of late years Large Blacks have been in good demand for crossing purposes; the crosses with a Middle White or a Large White Yorkshire, either way, are highly successful. If a Large Black sow and a Middle White boar are used, the result is the medium-sized Porker or Bacon Pig required for the London trade; by mating the Large Black with the Large White the larger type of pig favoured in the Midlands and North of England is obtained.

Large Blacks are now found in nearly every part of the United Kingdom, and they have been taken in large numbers to many countries abroad, where, in very varied climates, they have given every satisfaction. Among the countries to which exports have been made are South Africa, Argentina, Brazil, Chili, Australia, New Zealand, Canada, Jamaica, China, and practically every country in Europe.

Large Black Pigs at the Smithfield Show, 1902-11.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwt. lb.	lb.
†Not above 9 months ...	74	8 7	3 16	1·41
†Above 9, not above 12, months.	92	10 24	4 10	1·40
Single pigs not above 12 months.	47	10 28	4 9	1·38

† 1903-11 only.

THE TAMWORTH.

The Tamworth or Staffordshire breed is most numerous represented in the Midlands, particularly around Birmingham. It is a good type of bacon pig, light in the offal, with a long, deep and low body smoothly covered with firm flesh which contains a large proportion of lean and gives the highest quality of bacon.

General Appearance.—The colour of the hair, which is abundant, long, straight, and fine, is a golden-red or a dark chestnut on a flesh-coloured skin, more rarely tawny grey. Curly or black or very light gingery hair, a coarse mane, or black spots are all objectionable. The light shades indicate too much of the Yorkshire blood, which was employed to modernise the old slow-maturity Tamworth type, the most nearly related of all our pigs to the wild boar. The head is slim, the snout fine, the ears intermediate in size, set on high, rigid, pointed, and fringed with hair; the neck sharp between the ears, light towards the head, but swelling towards

the trunk and merging smoothly into deep well-covered shoulders. Neither the shoulder nor the thighs should bulge beyond the line of the side, but a long ham or gammon, fleshed firmly towards the hook, without folds of fat, is a special feature of the breed.

Tamworths are somewhat slow in maturing and feeding, but are excellent grazers or foragers, and the sows are exceptionally prolific and good milkers.

Value for Crossing.—The Tamworth crosses admirably with all other British breeds, and produces a hardy commercial class of pigs that are better able to withstand cold than pigs of some of the other breeds. The chestnut colour, although better than white, is not so well able to resist sun-burn as black.

Tamworth Pigs at the Smithfield Show, 1902-11.

Class.	Number of animals in Class during the 10 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwt. lb.	lb.
Not above 9 months ...	60	8 19	2 103	1·25
Above 9, not above 12, months.	80	11 0	3 67	1·20
Single pigs not above 12 months.	31	10 29	3 67	1·21

THE LINCOLNSHIRE CURLY-COATED.

The Lincolnshire Curly-coated is a very old breed, but up to the last few years its merits were known only in its own locality in Lincolnshire. The skin and the long abundant curly hair are white, though blue spots on the skin occasionally appear. The face is short, and the ears droop over it; the snout is of medium length and quite straight.

Early Maturity and Rapid Growth.—The breed is strong-boned, robust in constitution and prolific, and is claimed to be unsurpassed for early maturity and development. It was admitted to the Smithfield Show as a separate breed for the first time in 1908, and in that year secured the premier position for class average daily gain, and in the single pig class under twelve months.

The Secretary of the Lincoln Curly-coated Pig Breeders' Association states that five pigs at an average age of 237 days have given an average daily gain of 1 lb. 13·65 ozs. It is claimed to be equally good as a "porker" and as a bacon pig, producing the right kind of animal for the pork-butcher, at 8 stones (of 14 lb. dressed pork), 12 stones, 18 stones, or any weight up to 40 stones. Sows have been known to reach 30 to 35 stones at a year old, or 40 stones at 20 months after rearing a litter of pigs. Crossing with other British breeds has proved successful, especially with Berkshire, Large White and Large Black.

Lincoln Pigs at the Smithfield Show, 1908-11.

Class.	Number of animals in Class during the 4 years.	Average age.	Average live weight.	Average daily increase from birth (weight at birth disregarded).
		mths. days.	cwt. lb.	lb.
*Not above 9 months ...	20	8 2	3 44	1.55
†Above 9, not above 12, months.	28	10 10	4 43	1.56

* 1909-11 only.

† 1908-11.

THE LARGE WHITE ULSTER.

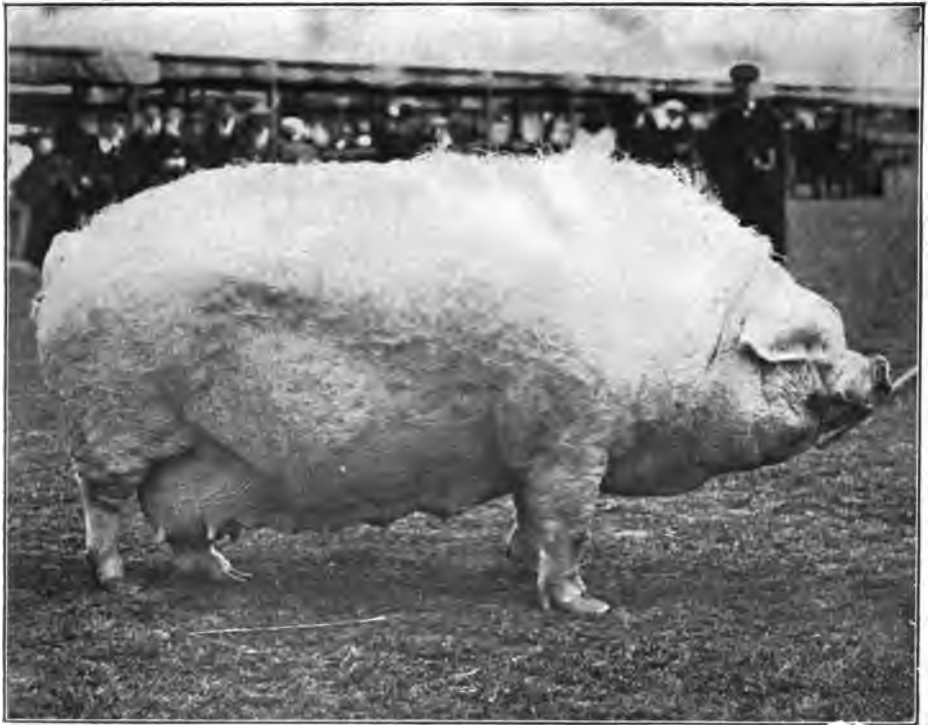
This breed has existed in the north of Ireland in very much its present form for some considerable time, although it was not a registered breed till about 1908. When the Royal Ulster Agricultural Society, after consultation with the Irish Department of Agriculture, decided to establish a *Herd Book*, a scale of points was drawn up, and arrangements made to determine by inspection the eligibility of boars and sows for registration. This inspection is made by competent judges at various centres throughout Ulster at stated periods each year. Before the end of 1911 there were 428 boars and 793 sows entered in the *Herd Book*.

In appearance the Large White Ulster closely resembles the Large White Yorkshire, "except that its ears are long, thin, and inclined well over the face, with a paucity of hair on the body—fine and silky in texture, thereby indicating a thin skin, so much desired by the bacon curer." The thin skin is specially favoured in the brine-cured, rolled bacon industry which is prevalent in the north of Ireland.



TAMWORTH BOAR, "KNOWLE BURLEIGH."

First Prize, Royal Agricultural Society's Show, 1911.



LINCOLNSHIRE CURLY-COATED SOW. "MIDVILLE A 1."

LIST
OF
BREED SOCIETIES,
WITH
PLACES OF SALE AND AVERAGE PRICES
OF ANIMALS OF EACH BREED.

(The information as to Places of Sale and Average Prices has been supplied, or verified by the Secretaries of the Breed Societies, to whom Buyers should apply for further particulars. As far as possible the most recent figures available have been obtained, and it is necessary to point out that in many cases the prices are below the normal level owing to the restriction of the export trade consequent on the outbreaks of foot-and-mouth disease which occurred in 1912.)

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
HORSES.	
Cleveland Bay	Cleveland Bay Horse Society of Great Britain and Ireland. Secretary : Thomas Curry, Field House, Marton, Yorkshire.
Clydesdale	Clydesdale Horse Society of the United Kingdom. Secretary : A. MacNeilage, 93, Hope Street, Glasgow.
Hackney	Hackney Horse Society. Secretary : Frank F. Euren, 12, Hanover Square, London, W.
Hunters	Hunters' Improvement and National Light Horse Breeding Society. Secretary : A. B. Charlton, 12, Hanover Square, W.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.																								
<p>Shows :—Royal Agricultural Society's, Yorkshire Agricultural Society's, Cleveland, Stokesley, Hinderwell and Egton.</p>	<p>Stallions : From £100 to £200. Mares : From £50 to £100. There are no fixed public sales.</p>																								
<p>Sales :—Perth, Elgin, Lanark, Ayr, Carlisle and Wigton (Cumberland). The Society does not arrange Sales.</p> <p>Shows :—Royal Agricultural Society's, Highland and Agricultural Society's, Glasgow, Edinburgh, Aberdeen, Kilmarnock and Ayr.</p>	<p>In 1911 auction sales of pedigreed stock gave the following results :—</p> <table><thead><tr><th></th><th>£</th><th>s.</th><th>d.</th></tr></thead><tbody><tr><td>North Acomb, 31 stallions averaged ...</td><td>87</td><td>11</td><td>8</td></tr><tr><td>Blackhall, 47 stallions averaged ...</td><td>44</td><td>7</td><td>4</td></tr><tr><td>Nether Bogside, 19 mares and fillies averaged ...</td><td>108</td><td>7</td><td>6</td></tr><tr><td>Perth, 53 (mixed, all ages) averaged ...</td><td>55</td><td>13</td><td>0</td></tr></tbody></table> <p>The stallion "Baron o' Buchlyvie" was sold by auction for £9,500.</p> <p>In 1912 a notable dispersion sale took place at Park Mains, when 54 head, mixed stock and all ages, averaged £151 8s. 2d. The highest price was £1,680 paid for the stallion Sir Rudolph. At the dispersion of the Rachan Stud, 15 head (all ages), chiefly mares and fillies, averaged £147 8s. 5d.</p>		£	s.	d.	North Acomb, 31 stallions averaged ...	87	11	8	Blackhall, 47 stallions averaged ...	44	7	4	Nether Bogside, 19 mares and fillies averaged ...	108	7	6	Perth, 53 (mixed, all ages) averaged ...	55	13	0				
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<p>Shows :—Hackney Horse Society's held in London in March, Royal Agricultural Society's, Highland and Agricultural Society's, and leading county and local shows.</p> <p>Sales :—No sales are arranged by the Society. Auction sales are held from time to time at various centres and on breeders' farms.</p>	<p>At a few recent sales the following prices were obtained :—</p> <table><thead><tr><th>No. of Animals.</th><th>Average Price.</th><th>Highest Price.</th></tr><tr><th></th><th>£ s. d.</th><th>£</th></tr></thead><tbody><tr><td>51</td><td>60 18 0</td><td>189</td></tr><tr><td>30</td><td>40 13 9</td><td>—</td></tr><tr><td>30</td><td>187 0 0</td><td>971</td></tr><tr><td>39</td><td>52 5 6</td><td>283</td></tr><tr><td>17</td><td>74 8 6</td><td>273</td></tr><tr><td>48</td><td>46 4 0</td><td>215</td></tr></tbody></table>	No. of Animals.	Average Price.	Highest Price.		£ s. d.	£	51	60 18 0	189	30	40 13 9	—	30	187 0 0	971	39	52 5 6	283	17	74 8 6	273	48	46 4 0	215
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<p>Sales by auction are held in London, York, Leicester and other towns.</p> <p>Shows :—The Society holds an Annual Show in London in March. Royal Agricultural Society's, Royal Richmond, and leading county and local shows.</p>	<p>For average useful Hunters, from 40 to 100 guineas. For high-class animals and noted performers, from 100 to 300 guineas.</p>																								

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
HORSES — <i>continued.</i>	
Polo Ponies 	Polo and Riding Pony Society. Secretaries : F. H. Badge and L. Collas, 12, Hanover Square, London, W.
New Forest Ponies ...	New Forest Ponies Association. Hon. Secretary : Thos. Stovold, Harrow Farm, Bransgore, Christchurch, Hampshire.
Shetland Ponies	Shetland Pony Stud Book Society. Secretary : R. W. Walker, 3 Golden Square, Aberdeen.
Shire 	Shire Horse Society. Secretary : J. Sloughgrove, 12, Hanover Square, London, W.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.																																													
<p>Sales by auction are held from time to time in London and at other centres, particularly in the South of England.</p> <p>Shows:—The Society holds a show in London in March. Classes are provided at the Royal Agricultural Society's and other shows.</p>	<p>Ponies of proved merit make from about £100 to £300. At recent sales by auction prices up to £630 were obtained. At an annual sale in 1912 at which principally young stock was sold, 38 animals averaged £47 10s. ; highest price £152 5s.</p>																																													
<p>An Annual Show is held at Lyndhurst, Hants, in April.</p> <p>Sales are held at Brockenhurst, Lymington, Ringwood and Lyndhurst.</p>	<p>Registered stallions in 1912 made up to £25 each, average price about £15. Registered mares averaged about £10 ; highest price £25. Unregistered mares average about £8, yearlings £6, and foals £3.</p>																																													
<p>Sales:—An annual joint sale of pedigreed ponies is held in September at Earls Hall, Leuchars, Fifeshire.</p> <p>Shows:—Highland and Agricultural Society's, Royal Agricultural Society's, Royal Northern Agricultural Society's, Lerwick Agricultural Association's, Tunbridge Wells Show, Polo Pony Show.</p>	<p>The average prices for stallions, mares, colts, fillies and foals obtained at the Joint Annual Sales held in Fife in the last few years were as follows:—</p> <table><tr><td>1909</td><td>...</td><td>£23 2s. 7d.</td><td>for 89 head.</td></tr><tr><td>1910</td><td>...</td><td>£20 13s. 2d.</td><td>" 124 "</td></tr><tr><td>1911</td><td>...</td><td>£17 18s. 2d.</td><td>" 106 "</td></tr><tr><td>1912</td><td>...</td><td>£15 11s. 10d.</td><td>" 126 "</td></tr></table>	1909	...	£23 2s. 7d.	for 89 head.	1910	...	£20 13s. 2d.	" 124 "	1911	...	£17 18s. 2d.	" 106 "	1912	...	£15 11s. 10d.	" 126 "																													
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<p>Sales:—Auction sales are arranged by the Shire Horse Society in connection with its Show at London in February ; sales are also held at Peterborough, Crewe, Derby and Wrexham and other places.</p> <p>Shows:—Shire Horse Society's, Royal Agricultural Society's, and all the principal Live Stock Shows in England and Wales.</p>	<p>The average prices obtained at the Shire Horse Show in 1911 and 1912, were £127 7s. for 149 head, and £120 6s. for 142 head, respectively. The highest price at the Society's Sales was £1,233 15s., given in 1911. Detailed prices for the 1912 sales were as follows:—</p> <table><thead><tr><th></th><th>Highest Price.</th><th>Average Price.</th></tr><tr><th></th><th>£ s. d.</th><th>£ s. d.</th></tr></thead><tbody><tr><td>6 Stallions, 1 year old</td><td>126 0</td><td>68 12 0</td></tr><tr><td>29 " 2 " "</td><td>241 10</td><td>107 5 7</td></tr><tr><td>23 " 3 " "</td><td>651 0</td><td>172 9 6</td></tr><tr><td>10 " 4 " "</td><td>336 0</td><td>163 3 4</td></tr><tr><td>5 " over 4 " "</td><td>231 0</td><td>173 5 0</td></tr><tr><td>17 Fillies 1 " "</td><td>94 10</td><td>61 9 1</td></tr><tr><td>12 " 2 " "</td><td>210 0</td><td>113 4 6</td></tr><tr><td>8 Mares 3 " "</td><td>136 10</td><td>101 19 7</td></tr><tr><td>7 " 4 " "</td><td>336 0</td><td>141 15 0</td></tr><tr><td>21 " over 4 " "</td><td>210 10</td><td>128 1 0</td></tr><tr><td>4 Geldings ...</td><td>58 16</td><td>48 11 3</td></tr></tbody></table> <p>At private sales the following noteworthy prices have been obtained—</p> <table><tr><td>1909 Tatton Dray King ...</td><td>£ 3,885</td></tr><tr><td>1911 Pailton Sorais (Mare)</td><td>1,260</td></tr><tr><td>1911 King of Tandridge ...</td><td>1,680</td></tr></table> <p>The two latter prices were made at a dispersion sale, at which 84 head averaged £188 17s. 6d.</p>		Highest Price.	Average Price.		£ s. d.	£ s. d.	6 Stallions, 1 year old	126 0	68 12 0	29 " 2 " "	241 10	107 5 7	23 " 3 " "	651 0	172 9 6	10 " 4 " "	336 0	163 3 4	5 " over 4 " "	231 0	173 5 0	17 Fillies 1 " "	94 10	61 9 1	12 " 2 " "	210 0	113 4 6	8 Mares 3 " "	136 10	101 19 7	7 " 4 " "	336 0	141 15 0	21 " over 4 " "	210 10	128 1 0	4 Geldings ...	58 16	48 11 3	1909 Tatton Dray King ...	£ 3,885	1911 Pailton Sorais (Mare)	1,260	1911 King of Tandridge ...	1,680
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LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
HORSES—continued.	
Suffolk	Suffolk Horse Society. Secretary : Fred. Smith, Woodbridge, Suffolk.
Welsh Pony	Welsh Pony and Cob Society. Secretary : John B. Bache, Stud Farm, Knighton, Radnorshire.
Yorkshire Coach... ..	Yorkshire Coach Horse Society. Secretary : Frederick Walker, 3, Blake Street, York.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>An Annual Sale is held by the Society at Ipswich in August.</p> <p>Shows :— Woodbridge Spring Show, Suffolk Agricultural Show, Essex Agricultural Show, and Royal Agricultural Show.</p>	<p>Estimated average prices for sound animals : —Foals, £25 ; Mares and Fillies, £65 ; Geldings, £55 ; Stallions, £100. At the 1912 sales Foals made up to £37 5s. 6d., Mares up to £99 10s.</p>
<p>Sales:—An Annual Sale of Ponies and Cobs is held by the Society. The first was held at Llandrindod Wells in 1912 ; other sales at different centres and at Fairs and Shows throughout Wales.</p> <p>Shows :—Royal Agricultural Society's ; Polo Pony Society's, Llanwrtyd Wells ; Welsh National Show, Church Stretton, Knighton, and various shows throughout Wales.</p>	<p>Small registered pony mares off the hills make from about £12 to £20. Prize-winning pony stallions realise from £50 upwards ; mares from £30. The stallion "Greylight" was sold in Australia for £1,050. "Cream of Eppynt" was sold to go to the same country for £105.</p>
<p>Shows :—Royal Agricultural Society's, Yorkshire Agricultural Society's, Malton, Escrick, Whitby, Pocklington and Stokesley.</p>	<p>These horses are now in the hands of comparatively few owners ; there are no public sales, so that no record of prices is available. Good stallions make about from £200 to £300 ; mares from £100 to £200.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
<p>CATTLE.</p> <p>Aberdeen-Angus ... Aberdeen-Angus Cattle Society. Secretary : James R. Barclay, 9, Old Market Place, Banff, Scotland.</p> <p>English Aberdeen-Angus Cattle Association. Hon. Secretary : Albert Pulling, Beddington, near Croydon, Surrey.</p>	
<p>Ayrshire Ayrshire Cattle Herd Book Society. Secretary : John Howie, 58, Alloway Street, Ayr.</p>	
<p>British Holstein ... British Holstein Cattle Society. Secretary : George Hobson, 16, Bedford Square, London, W.C.</p>	
<p>Devon Devon Cattle Breeders' Society. Secretary : John Risdon, Wiveliscombe, Somerset.</p>	

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Annual Sales at Perth, Aberdeen, Inverness, Birmingham (under the auspices of the English Association), Dublin.</p> <p>Shows :—Highland and Agricultural Society's, Royal Northern Agricultural Society's, Royal Agricultural Society's and the leading Shows throughout Scotland and the North of England.</p> <p>Annual Spring Show and Sale of the Association at Bingley Hall, Birmingham.</p>	<p>At the Perth Sale in 1912, 281 bulls averaged £34 4s. 11d., the highest price being £278. Females of all ages averaged £30, the highest price being £231.</p> <p>At the Birmingham Sale in 1912, 62 young bulls averaged £22 11s. 4d. and 17 cows and heifers £22 11s. 10.</p>
<p>Sales at the principal towns in South-West Scotland, such as Glasgow, Greenock, Paisley, Lanark, Wishaw, Kilmarnock, Ayr, Dumfries, Castle Douglas, Stranraer.</p> <p>Shows :—Highland and Agricultural Society, Royal Agricultural Society, Ayr, Kilmarnock and Glasgow.</p>	<p>Ordinary cows at calving, £12 to £18. Young pedigree cows at calving, £30 to £50. Ordinary bulls, £10 to £20. Young pedigree bulls from £20 to £50. Pedigree Ayrshire bulls and cows are, as a rule, only to be obtained by private treaty from breeders at their farms or at the principal shows.</p>
<p>Shows :—Royal Agricultural Society's, Highland and Agricultural Society's and Tring.</p> <p>There are no official public sales.</p>	<p>At a recent dispersion sale, 41 cows and heifers of all ages averaged £32 8s.; highest price £52 10s.</p> <p>At another sale 19 cows averaged £40 1s. 3d; highest price £64 1s.; and 5 bulls averaged £28 11s. 2d. Still more recently, 93 females averaged £29 7s. 1d.; highest price £73 10s.</p>
<p>Sales :—The Society holds sales in February and October at Taunton and Exeter respectively.</p> <p>Shows :—Royal Agricultural Society's, Bath and West, Devon County, Somerset County, Royal Cornwall and Royal Counties'.</p>	<p>At the spring sale, 1912, 82 bulls averaged £23 9s. 3d.; highest price £65 2s. At the autumn sale, 1912, 56 bulls averaged £27 7s. 6d.; 17 cows and heifers £22 1s. 1d. The highest prices were £74 11s. and £32 11s. respectively. At recent private sales bulls have realised up to £69 6s., cows and heifers up to £70 7s.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
CATTLE — <i>continued.</i>	
Galloway	<p>Galloway Cattle Society. Secretary : F. N. M. Gourlay, Milton, Tynron, Thornhill, Dumfriesshire.</p> <hr/> <p>Royal Agricultural and Horticultural Society of Guernsey. Secretary : H. Carré, States Arcade, Guernsey.</p> <hr/> <p>English Guernsey Cattle Society. Secretary : Robt. F. Ling, 12, Hanover Square, London, W.</p> <hr/>
Hereford	<p>Hereford Herd Book Society. Secretary : W. G. C. Britten, 20, East Street, Hereford.</p> <hr/>
Highland	<p>Highland Cattle Society of Scotland. Secretary : Duncan Shaw, 15, High Street, Inverness.</p>

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Sales :—A sale of bulls is held at Castle Douglas in spring. Other sales at Carlisle and Newton Stewart.</p> <p>Shows :—Highland and Agricultural Society's, Royal Agricultural Society's, Dumfries, Castle Douglas, Carlisle, Dalbeattie and New Galloway.</p>	<p>From £18 18s. to £26 5s. for commercial stock. At the Castle Douglas sale in 1912, bulls realised up to £78 15s.; 120 animals averaged £23.</p>
<p>Sales :—Animals in the Islands are sold chiefly by private treaty.</p> <p>Shows :—Royal Agricultural, Bath and West, London Dairy Show, Royal Counties, Devon County, Royal Cornwall, Tunbridge Wells and other shows principally in the south of England.</p> <p>Sales :—The Society does not hold sales, but sales by auction are held throughout the year at various centres and on breeders' farms.</p>	<p>At recent sales, bulls have averaged about £26; highest price £35. Cows and heifers averaged £40; highest price £70. At a small sale held recently, 26 animals averaged £33 3s. 1d.</p>
<p>A show and sale of bulls is held twice yearly, in March and April, by the Society in the Cattle Market, Hereford. Sales are also held at Shrewsbury and other centres.</p> <p>Shows :—Royal Agricultural Society's and all the principal Live Stock Shows of England. Royal Dublin Society's Show.</p>	<p>At the Society's sales in 1912, the following prices were obtained :— March, 107 bulls averaged £32 4s.; highest price £84. April, 63 bulls, chiefly yearlings, averaged £28 10s.; highest price £63. At the recent dispersion of a famous herd, 24 yearling heifers averaged £59 17s., 20 two-year-old heifers £67 14s. 6d., 41 cows and calves £115 10s., and 7 bulls £123 6s. Highest prices, bulls £378, cows £220 10s. 164 animals, all ages, averaged £62 16s. 6d.</p>
<p>Sales :—The Society holds a show and sale of bulls at Oban in Spring. Other sales are held at Stirling, Inverness, Dingwall, Perth, &c.</p> <p>Shows :—Highland Society's, Royal Agricultural Society's and local shows in Inverness-shire, Argyleshire and Perthshire, &c.</p>	<p>At the Society's sale in 1912, 12 bulls above 3 years old averaged £28 13s. 4d., 41 2-year-olds £24 6s. 7d., 17 yearlings £16 16s.; highest price £67. In 1911, 83 animals averaged £28 10s. 7d., highest price £95.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
<p>[CATTLE—continued.</p> <p>Jersey</p>	<p>Royal Jersey Agricultural and Horticultural Society. Secretary : J. A. Perrée, 8, Church Street, Jersey.</p> <p>English Jersey Cattle Society. Joint Secretaries : Messrs. T. W. Hammond & L. J. Craufurd, 19, Bloomsbury Square, London, W.C.</p>
<p>Kerry and Dexter ...</p>	<p>English Kerry and Dexter Cattle Society. Joint Secretaries : Messrs. Hammond & Craufurd, 19, Bloomsbury Square, London, W.C.</p>
<p>Longhorn</p>	<p>Longhorn Cattle Breeders' Association. Hon. Secretary : B. Worrall, Staple Aston, Oxford.</p>
<p>Red Poll</p>	<p>Red Poll Cattle Society of Great Britain and Ireland. Secretary : Herbert P. Blofield, Morley Manor, Wymondham, Norfolk.</p>

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shws.	Average Prices.
<p>Show Ground, Jersey.</p> <p>Shows :—Royal Agricultural Society's, Bath and West Royal Counties, Tunbridge Wells, Tring, London Dairy Show, and the various County Shows.</p> <p>Sales are carried out under the auspices of the Society at Aylesbury and Hatfield.</p>	<p>Sales are carried out chiefly at owners' estates and farms. Yearling bulls of quality readily make £21 and upwards, and cows and heifers in milk £21 to £26 5s. and upwards. The average price obtained at public auctions in 1912 for 609 head of pedigree cows, heifers and bulls was £16 4s. 5d.</p>
<p>Sales are carried out under the auspices of the Society at Hatfield and Reading.</p> <p>Shows :—Royal Agricultural Society's, Bath and West, Royal Counties, Royal Dublin, London Dairy Show.</p>	<p>At recent sales bulls averaged £14 14s., highest price £20. Cows and heifers averaged £12 12s., highest price £25.</p>
<p>Shows :—Royal Agricultural Society's, Warwickshire Agricultural Society's.</p> <p>No public sales are held.</p>	<p>25 guineas to 45 guineas. At private sales prices for yearling young bulls reached 28 guineas and for heifers 32 guineas.</p>
<p>Spring and Autumn Sales at Ipswich.</p> <p>Shows :—Royal Agricultural, Essex Agricultural, Norfolk Agricultural, Suffolk Agricultural, London Dairy Show.</p>	<p>At the recent dispersion of a well known herd 47 animals of all ages averaged £54 10s. Cows and heifers averaged £67, highest price £115 10s. Bulls averaged £90, highest price £210. At another sale cows realised up to £65, bulls up to £42.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
CATTLE — <i>continued</i> . Shorthorn 	Shorthorn Society of Great Britain and Ireland. Secretary : E. J. Powell, 12, Hanover Square, London, W.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Collective Sales.	Results of Sales in 1911.					
	Bulls.			Cows and Heifers.		
	Number Sold.	Average Price.	Highest Price.	Number Sold.	Average Price.	Highest Price.
Shows :—Royal Agricultural Society's, Highland and Agricultural Society's, Royal Dublin Society's, and practically all the Agricultural Shows throughout the United Kingdom.						
<i>February.</i>						
Royal Dublin Society's Show	87	£ 28	£ 59	—	£ —	£ —
Inverness Collective Sale ...	90	21	55	—	—	—
Perth " " ...	309	46	756	173	27	220½
Aberdeen " " ...	221	22	126	23	20	52½
<i>March.</i>						
Birmingham Show and Sale	339	50	1,575	69	33	74½
Darlington Collective Sale ...	72	27	273	13	17	30
Penrith " " ...	111	40	420	38	23	52½
York " " ...	143	24	262½	85	27	105
Belfast Show and Sale ...	299	24	105	76	18	44
<i>April.</i>						
Kingham (Oxfordshire) Collective Sale.	35	23	75	60	26	84
Royal Dublin Society's Show	234	35	147	26	20	43
<i>May.</i>						
York Collective Sale ...	66	21	38	29	23	42
<i>June.</i>						
Royal Agricultural Society's Show.	25	51	262½	10	59	157½
<i>September.</i>						
Birmingham Show and Sale	69	23	96	51	20½	47
Irish Shorthorn Breeders' Association Sale (Dublin).	—	—	—	32	25	105
<i>October.</i>						
Kingham (Oxfordshire) Collective Sale.	20	27	48	52	22	44
Perth Collective Sale ...	8	25	81	55	29	315
Aberdeen " " ...	29	22	105	141	38	210
York " " ...	56	22	51	42	23	42
Penrith " " ...	28	22	43	30	21	42
Darlington " " ...	58	29	178½	30	24	110
[Many sales are also held by breeders on their farms.] At the recent sale of calves from the Collynie herd, 24 bull calves averaged £377—highest price £2,100. Twelve heifer calves averaged £72—highest price £378.]						

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
CATTLE—continued. Shorthorn— <i>cont.</i>	Dairy Shorthorn (Coates's Herd Book) Association. Secretary : F. N. Webb, Babraham, Cambridge.
Lincolnshire Red Short- horn.	Lincolnshire Red Shorthorn Association. Secretary : W. Frankish, St. Benedict's Square, Lincoln.
South Devon 	South Devon Herd Book Society. Secretary : Alfred Michelmores, Gate House, Totnes, S. Devon.
Sussex 	Sussex Herd Book Society. Secretary : A. G. Holland, 12, Hanover Square, London, W.
Welsh Black 	Welsh Black Cattle Society. Secretaries : Messrs. J. Thomas & Son, 9, Victoria Place, Haverfordwest.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Shows :—Royal Agricultural Society's, London Dairy Show, Royal Counties, Bath and West, and other agricultural shows.</p> <p>There are no official public sales. Dairy Shorthorns are nearly always bought direct from breeders by private contract.</p>	<p>At recent sales by auction the following prices were obtained :—Kelmscott : 40 cows and calves averaged £68 17s. 4d.—highest price £178 10s. ; 13 bulls averaged £47 6s. 7d.—highest price £89 5s. Puddington : 58 cows and heifers averaged £72 19s. 2d.—highest price £262 10s. ; 10 bulls averaged £89 0s. 9d.—highest price £178 10s. ; Cranford (dispersion) : 181 cows and heifers averaged £83 1s.—highest price £525 ; 6 bulls averaged £51 9s.—highest price £84.</p>
<p>Shows :—Royal Agricultural Society's, Lincolnshire, Peterborough, and London Dairy Show.</p> <p>Sales under the auspices of the Association are held at Lincoln in spring.</p>	<p>At the Association's sales in 1912 267 bulls averaged £28 2s. 11d.—highest price £152. In 1911, 276 bulls averaged £27 1s.—highest price £157 10s. At a recent private sale bulls made up to £75 12s., cows up to £47 5s.</p>
<p>Shows :—Royal Agricultural Society's, Bath and West, Devon County, Royal Cornwall, London Dairy Show.</p> <p>Annual Sales are held by the Society at Totnes in April and October.</p>	<p>At the Society's sales in 1912, the following prices were made :—Spring : 68 bulls averaged £28 1s. ; highest price, £75 12s. Autumn : Bulls made up to £69 6s. ; cows to £43 1s. At a recent private sale, cows and heifers made up to £48 6s. each.</p>
<p>Annual Spring and Autumn Sales of Pedigree Stock are held at Haywards Heath, and there are various private sales.</p> <p>Shows :—Royal Agricultural Society's, Bath and West, Sussex County, Tunbridge Wells, Mid-Kent and East-Kent.</p>	<p>At the Autumn Sale, 1911, 11 bulls averaged £25 8s. 9d. per head. At various private sales the average prices for cows varied from £22 to £46 ; for bulls from £26 to £54. Best individual prices : Bulls £52 10s. ; Cows £76 13s.</p>
<p>Royal Agricultural Society's Show, Welsh National Show and Sale, County and local shows throughout Wales, Whitland (S. Wales) Annual Show and Sale.</p>	<p>The sales in connection with the Welsh National Show and the Whitland Show have been suspended for the last year or two. The average price of bulls is about £25, though up to £60 is obtained for the best animals.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary
SHEEP.	
Blackface	Blackface Sheep Breeders' Association. Secretary : R. Macmillan, Woodlea, Moniaive, Thornhill.
Border Leicester	Society of Border Leicester Sheep Breeders. Secretary : A. S. Grant, 377, High Street, Edinburgh.
Cheviot	Cheviot Sheep Society. Secretary : John Robson, Newton, Bellingham, Northumberland.
Cotswold	Cotswold Sheep Society. Secretary : James W. Tayler, Bourton-on-the-Water Gloucestershire.
Dartmoor	Dartmoor Sheep Breeders' and Flock Book Association. Secretary : H. Sleeman, East Russell House, Morewell, Tavistock.
Derbyshire Gritstone ...	Derbyshire Gritstone Sheep Breeders' Society. Secretary : William J. Clark, Alport, Bakewell, Derbyshire.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Sales at Lanark (which is regarded as the leading centre for the best rams), Perth, Ayr, Stirling, Castle Douglas and Oban.</p> <p>Shows :—Highland and Agricultural Society's, Royal Agricultural Society's, and Agricultural Shows throughout Scotland and the North of England.</p>	<p>At the Lanark Sales, 1912, rams made up to £130 each; the highest price in 1911 was £180. Lots from different breeders averaged from £2 10s. to £41 0s. 10d. Draft Ewes averaged from 16s. to 22s.; Ewe-Lambs, 10s. to 15s.; Wether Lambs, 9s. to 15s. At the Lanark Sale in 1909 a shearling ram of this breed was sold for £250, the record price for the breed.</p>
<p>Sales at Kelso (where the best Rams are sold), Perth, Edinburgh, Ayr, Lockerbie, and other centres.</p> <p>Shows :—Highland and Agricultural Society's, Royal Agricultural Society's, Border Union, Northumberland, Angus, Ayr, Royal Northern (Aberdeen), and Edinburgh.</p>	<p>At the Kelso Ram Sales in 1912, rams made up to £160 each. Consignments from different breeders averaged from £7 10s. to £28 18s. At the dispersion of a famous flock in 1911, 356 animals of all ages, and both sexes averaged £8 9s. 11d; one ram in his fourth year, making £140.</p>
<p>Sales at Hawick (the recognised centre for the best rams), Rothbury, Bellingham, Lockerbie, Inverness and Laing.</p> <p>Shows :—Royal Agricultural Society's, Highland and Agricultural Society's, Northumberland, and the local shows in the Border district.</p>	<p>At the Hawick Sales, 1912, rams made up to £125 each. Consignments from different breeders averaged from about £2 10s. to £30 10s. Draft Ewes average about £1 15s.; Ewe Lambs, 16s.; Wedder Lambs, 18s.; Top Ewe Lambs, £1 15s.</p>
<p>Gloucester Agricultural Show, Royal Agricultural Society's Show, Bath and West, Norfolk County, and Cirencester Ram Fair.</p>	<p>Rams average about £7. At the Cirencester Ram Fair, 1912, the highest price was £15 15s. Few are sold by public auction, many being purchased from breeders at home for exportation.</p>
<p>An Annual Sale, under the auspices of the Association, is held at Tavistock.</p> <p>Shows :—Royal Agricultural, Devon County, Lydford, Yelverton, Roborough, Yealmp-ton, Cornwood, Tavistock, Okehampton, Liskeard, Launceston, &c.</p>	<p>At the first Annual Sale held at Tavistock in 1911 the highest price for a ram was £21; average £8 to £10.</p>
<p>Royal Agricultural Society's Show, and Bakewell.</p>	<p>Information as to average prices is not available.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
SHEEP—continued.	
Devon Longwool... ..	Devon Longwooled Sheep Breeders' Society. Secretary : John Risdon, Jr. Wiveliscombe, Somerset.
Dorset Down	Dorset Down Sheep Breeders' Association. Secretary : E. B. Duke, 47, South Street, Dorchester.
Dorset Horn	Dorset Horn Sheep Breeders' Association. Secretary : Thomas H. Ensor, Cornhill, Dorchester.
Exmoor Horn	Exmoor Horn Sheep Breeders' Society. Hon. Secretary : D. J. Tapp, Highercombe, Dulverton, Somerset.
Hampshire Down	Hampshire Down Sheep Breeders' Association. Secretary : J. E. Rawlence, 49, Canal, Salisbury.
Kent or Romney Marsh ...	Kent or Romney Marsh Sheep-Breeders' Association. Secretary : W. W. Chapman, Room 4, Mowbray House, Norfolk Street, Strand, London, W.C.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Sales at Exeter, Taunton, and Tiverton.</p> <p>Shows :—Royal Agricultural, Bath and West, Devon County, Royal Cornwall, Royal Counties.</p>	<p>At the 1912 Sales held by the Society, 23 Rams averaged £7 13s. 9d. ; highest price £14 14s. Draft Ewes average about 40s. ; Yearling registered ewes make about 55s. to 60s.</p>
<p>Shows :—Royal Agricultural Society's, Bath and West, Royal Counties, Dorchester and Blandford Agricultural Societies.</p> <p>Sales at Dorchester, Blandford and Sherborne.</p>	<p>Rams average about £7 7s. 0d. ; highest price £31 10s. ; Ram Lambs average about £8 8s., highest price £42 ; Draft Ewes, £2 2s. to £2 14s. ; Flock Ewes, £2 6s. to £4 4s. ; Ewe Lambs, £1 8s. to £2 2s. ; Wether Lambs, £1 8s. to £2 6s.</p>
<p>Shows :—Royal Agricultural Society's, Bath and West, Royal Counties, Somerset County, Royal Isle of Wight.</p> <p>Sales and Shows at Dorchester.</p>	<p>Rams, 10 to 15 guineas ; Ram Lambs, 4 to 12 guineas ; Two-tooth Ewes, £2 12s. to £3 8s. ; Four-tooth Ewes, £2 14s. to £3 10s. ; Six-tooth Ewes, £2 8s. to £2 10s. ; Ewe Lambs, £2 to £2 8s. These are average prices obtained at Fairs and Sales. Picked specimens would cost from 20 per cent. to 25 per cent. more.</p>
<p>Sales and Shows at Winsford, Dulverton, Bratton Fleming, and South Molton.</p> <p>Shows :—Royal Agricultural, Bath and West, Devon County.</p>	<p>In 1912, Rams made up to £21 and Ewes up to 47s. 6d. ; average prices, Rams £6 0s. 9d. ; 3,000 Ewes averaged 36s.</p>
<p>Sales :—The following Fairs, amongst others :—Salisbury, Wilton, Britford, Weyhill, Oxford, Marlborough, Alresford, Overton.</p> <p>Shows :—Royal Agricultural Society, Bath and West, Royal Counties, Wilts County, and leading Shows in South and Midlands of England.</p>	<p>In 1912 the highest price for the hire of a Ram Lamb was £210, and for the purchase outright £241 10s. The consignments from different breeders at various sales averaged from about £5 to £21 15s. 6d. Stock Yearling Ewes ranged from about £2 5s. to £3 5s.</p>
<p>The Association holds an Annual Sale and Show at Ashford ; other Sales are held at Romney, Ham Street, Maidstone, Strood, Rye and Sittingbourne.</p> <p>Shows :—Royal Agricultural Society's, Royal Counties', Tunbridge Wells, East-Kent and Mid-Kent Agricultural Societies.</p>	<p>The average price for 323 rams sold at the Annual Show and Sale of the Association held in 1912 was £11 3s. 5d. The highest individual price for a ram was £178 10s.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
SHEEP—continued.	
Kerry Hill	Kerry Hill (Wales) Sheep Breeders' Association, and Flock Book Society. Joint Secretaries : Messrs. Morris, Marshall & Poole, Chirbury, Shropshire.
Leicester	Leicester Sheep Breeders' Association. Secretary : W. A. Brown, Elms Villa, Driffield, Yorkshire.
Lincoln Longwool	Lincoln Longwool Sheep Breeders' Association. Secretary : W. Frankish, St. Benedict's Square, Lincoln.
Lonk	Lonk Sheep Breeders' Association and Flock Book Society. Secretary : J. C. Ashworth, Overtown, Cliviger, near Burnley, Lancashire.
Oxford Down	Oxford Down Sheep Breeders' Association. Secretary : Howard Sammons, 19, George Street, Oxford.
Ryeland	Ryeland Flock Book Society. Secretary : J. T. Pinches, Stoneleigh, Ryelands, Hereford.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
Shows :—Royal Agricultural Society's, Welsh National, Shropshire and West Midland. Annual Sales at Kerry (Mont.) and Craven Arms (Salop).	Average price for Ewes at last Sale, £1 15s. to £2; highest price £3 3s. Rams averaged from £8 to £10; highest price £38 17s. Ram Lambs averaged £5; highest price £15 15s.
Sales :—The Association holds a sale of rams at Driffield; other sales at Malton, Seamer, Hull and other local centres. Shows :—Royal Agricultural Society's, Great • Yorkshire, Stokesley, North Lonsdale, Bridlington, Driffield.	At the Association sales in 1912 different consignments of shearling rams averaged from £8 13s. 3d. to £15 14s. 6d.; highest price £26 15s. 6d. In 1911 the average price was £10 11s. 6d.; the highest £23 2s. At other sales the average of lots from different flocks ranged from £4 4s. to £11 12s. Yearling registered ewes made up to £3 each.
Shows :—Royal Agricultural Society's, Lincolnshire, Yorkshire. Sales :—The Association holds sales of rams at Lincoln in July and September. Some of the leading breeders hold annual sales.	At the September sales, 1912, 116 rams averaged £9 18s. 6d., the highest price being £65 2s. At the Riby Sale, 1912, 49 rams averaged £22 9s. 7d.; highest price £173 5s. and 13 yearling ewes averaged £5 1s.; highest price £5 10s. 6d. At the Riby Sales in the last 14 years 654 rams have averaged £61 8s. 7d.; highest price £1,522 10s.
Shows :—Royal Agricultural Society's, Royal Lancashire, Whalley, Crawshawbooth, Colne, Cliviger, Padiham, Worsthorpe and Newchurch. Fairs :—Near Todmorden, Moses Hall, Marsden, Meltham, Holme in Cliviger, and Haslingden, and Annual Fair at Holme each September.	Rams range from about £5 to £10, registered yearling ewes from £2 to £3.
Sales :—Oxford Ram Fair, Cirencester, Kelso Ram Sales. Shows :—Royal Agricultural Society's, Bath and West, Oxfordshire, Gloucestershire, Royal Counties, Highland and Agricultural Society's.	Rams, 10 guineas; Ram Lambs, 7 guineas. Good first-class rams can be bought from leading breeders at about 15 guineas each, and rams for show purposes up to 100 guineas each. Picked yearling ewes can be obtained from the best breeders at about 5 guineas each. At the Oxford Ram Fair, 1912, Shearling Rams made up to £47 5s. each, Ram Lambs up to £42. Consignments from different flocks averaged from about £4 to £27 16s. 6d.
Shows :—Royal Agricultural Society's, Herefordshire and Worcestershire. Sales :—Brecon, Talgarth, Hereford.	Draft Ewes, £1 15s. to £2 10s. per head; Rams, £5 5s. to £10 10s. each.

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
SHEEP—continued. Shropshire 	Shropshire Sheep Breeders' Association. Secretaries : Messrs. Alfred Mansell & Co., College Hill, Shrewsbury.
South Devon 	South Devon Flock Book Association. Secretary : W. W. Chapman, Room 4, Mowbray House, Norfolk Street, Strand, London, W.C.
Southdown 	Southdown Sheep Society. Secretary : W. J. Wickison, 12, Hanover Square, London, W.
Suffolk 	Suffolk Sheep Society. Secretary : E. M. Prentice, 25, Marlborough Road, Ipswich.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Shows :—Royal Agricultural Society's, Shropshire and West Midland, Highland and Agricultural Society's, Royal Lancashire, Welsh National, Staffordshire, Royal Dublin.</p> <p>Sales :—The Association does not hold sales, but sales are held at the Royal Agricultural Show, also at Shrewsbury and other centres in the West Midlands.</p>	<p>At the 1911 show of the Royal Agricultural Society the average price of Two-shear Rams was £15 15s., of Shearling Rams, £29 9s. The highest price was £126. At sales in 1912 the average prices of different flocks were as follows :—Rams, £7 19s. 4d. to £16 1s. 4d., highest price, £105; Ewes, £3 16s. 8d. to £4 2s., highest price, £6 6s.</p>
<p>Shows :—Royal Agricultural Society's, Bath and West, Royal Cornwall, Devon County, and Smithfield.</p> <p>Sales :—Totnes, Liskeard, Truro, and South Brent.</p>	<p>At Totnes, 1912, the average price of 121 rams sold was £9 17s. 7d., highest price £32 10s. At the Liskeard sales the average price was £8 14s. 5d. and the highest £9 12s. 1d.</p>
<p>Sales are held annually at Chichester, Lewes, Findon, &c.</p> <p>Shows :—Royal Agricultural Society's, Royal Counties, Bath and West, Sussex County, Tunbridge Wells, East Kent, and other County and local shows.</p>	<p>Rams have been sold up to £273; ram lambs up to £75, and ewes up to £35 14s. At the Chichester Sale, 1912, 324 rams averaged £7 6s. 4d., highest price, £57 15s. 305 Ram Lambs averaged £5 0s. 11d.; highest price £24 3s. Yearling Ewes averaged from £2 3s. 6d. to £2 19s. 8d.</p>
<p>Sales :—The Society holds Annual Sales at Ipswich in August and September, at which chiefly Ram Lambs and Yearling Ewes are sold. Yearling Rams are usually sold privately. Other sales are held at Newmarket, Great Bentley, Sutton, Kesgrave, and considerable numbers of Rams are also sold at the Kelso Ram Sales.</p> <p>Shows : Royal Agricultural Society's, Suffolk County, Essex County, Norfolk County, and Highland and Agricultural Society's.</p>	<p>At the Society's Sales in 1912 the following prices were obtained :—</p> <p>August :—125 Ram Lambs averaged £10 2s. 1d.; highest price £34 13s.</p> <p>August :—1,528 Yearling Ewes averaged £2 19s. 7d.; highest price £4 13s.</p> <p>September :—155 Ram Lambs averaged £6 8s. 4d.; highest price £18 18s.</p> <p>At other Sales 5,465 Ewe Lambs averaged £1 9s.; highest price £2 10s.</p> <p>At a recent dispersion Sale 168 Ewes ranging up to 4 years averaged £4 3s. 2d.; highest price £8 15s. 95 Ewe Lambs averaged £2 11s. 5d.; highest price £5 2s. 6d.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
SHEEP—continued. Wensleydale 	The Incorporated Blue-faced Sheep Breeders' Association. Hon. Secretary : John A. Willis, Manor House, Carperby, Yorkshire. Wensleydale Longwool Sheep Breeders' Society. Secretary : R. B. Hodgson, Hallwith, Spennithorne, Leyburn, Yorkshire.
Welsh Mountain ...	Welsh Mountain Sheep Breeders' Association and Flock Book Society. Secretary : Robert N. Jones, Brynmelyn, Corwen, N. Wales.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Sales :—The Incorporated Association holds Annual Sales at Hellifield early in October. The Society holds its Annual Sale at Northallerton early in October. Other Sales are held at various centres in North Yorkshire, also at Darlington and Kirkby Stephen.</p> <p>Shows :—Royal Agricultural Society's, Great Yorkshire, Royal Lancashire, South Durham, and North Yorkshire, &c.</p>	<p>At the 1912 Sales at Hellifield, Rams averaged £7; highest price £30. Ram Lambs averaged £4; highest price £19.</p> <p>At the Northallerton Sales Rams made up to £22; Ram Lambs up to £10.</p> <p>At a dispersion Sale in September, 1912, Shearling Ewes averaged £9 4s.; highest price £14. Ewe Lambs averaged £5 10s.; highest price £10. Ram Lambs made from £4 to £22 10s.</p>
<p>Shows :—Royal Agricultural Society's, Welsh National, Shropshire and West Midland, Oswestry, Llanfyllin, Llangollen, Denbighshire, East Glamorgan, Derynack, Vale of Clwyd, Bedwelty, Edeyrnion, Carnarvon and Anglesey, and Merioneth.</p>	<p>At recent sales Ram Lambs made up to £5 10s.; Shearling Rams up to £17 10s. Picked Registered Shearling Ewes from the best flocks make up to £5 5s. each.</p>

Breed.	Name of Society and Address of Secretary.
PIGS.	
Berkshire	British Berkshire Pig Society. Secretary : Edgar Humfrey, Shippon, Abingdon, Berkshire.
Large Black	Large Black Pig Society. Secretary : W. J. Wickison, 12, Hanover Square, London, W.
Large White Ulster ...	Large White Ulster Pig Herd Book Society. Secretary : Kenneth MacRae, Balmoral, Belfast.
Large White Yorkshire ...	National Pig Breeders' Association. Secretary : John Parr, Nottingham Road, Borrowash, Derby.
Lincolnshire Curly Coated	Lincolnshire Curly Coated Pig Breeders' Association. Hon. Secretary : Charles Edward Williams, Thornhayes, Sleaford, Lincolnshire.

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Shows :—Royal Agricultural Society's, Royal Counties, Bath and West, Royal Counties, Oxfordshire, Suffolk, Notts, Wilts, Tring, Royal Lancashire, and Peterborough, and other County and local shows throughout the country.</p> <p>Sales are held at the Royal Agricultural Show and on breeders' farms.</p>	<p>Ordinary prices for good Berkshires about 10 months old, Boars and Sows 5 to 10 guineas. For superior show animals and winners of prizes from 10 to 25 guineas each. Sales are principally conducted on the farms. At a recent private sale 118 animals, many of them young, averaged £6 5s. 4d.; highest £23 2s.</p>
<p>Shows :—Royal Agricultural Society's, Bath and West, Royal Counties, Peterborough, Suffolk, Essex, Devon and other County Shows.</p> <p>Sales are held in connection with the Royal Agricultural Show and on breeders' farms.</p>	<p>First-class pedigree Boars from £15 to £20; Sows from £10 to £12. The only special sale for Large Blacks is that held in connection with the Annual Show of the Royal Agricultural Society. At this show in 1911, 10 boars averaged £11 10s. per head, and 12 sows and gilts £10 10s. 10d. per head. At a recent sale boars made up to £21, sows up to £10 10s. In 1910 a boar was sold for £52.</p>
<p>Shows :—Royal Ulster Agricultural Society's, Dublin Spring Show and at Provincial Agricultural Shows in the North of Ireland.</p>	<p>The Society does not conduct public sales. Pigs are generally sold by private treaty. Young Boars average from £5 to £7. Exceptionally good animals about £10. Gilts average from £3 to £6.</p>
<p>Shows :—Royal Agricultural Society's, Bath and West, Royal Lancashire, Great Yorkshire, Peterborough, Royal Counties, Highland and Agricultural Society's and most of the County Shows.</p> <p>Sales are held in connection with the Royal Show but pigs are sold chiefly on breeders' farms.</p>	<p>At a recent sale, 61 animals averaged £15 11s. 4d.; highest price, Boars, £147; Sows, £63. At a sale in 1911, 64 animals averaged £15 17s. 7d. At other sales by auction Boars and Sows have realised up to about £25 each. At three recent sales 90, 100 and 70 animals averaged £9 6s. 9d., £10 3s. 11d. and £9 6s. respectively.</p>
<p>Shows :—Royal Agricultural Society's, Lincolnshire Agricultural Society's, Peterborough Agricultural Society's, Yorkshire, Nottinghamshire and Newark.</p> <p>Sales :—The Association holds an Annual Sale at the Lincolnshire Agricultural Society's Show.</p>	<p>At the Association's sale in 1912, 10 boars averaged £10 4s. 7d.; highest price £27 6s. 10 sows averaged £6 18s. 7d.; highest price £13 2s. 6d.</p>

LIST OF BREED SOCIETIES.

Breed.	Name of Society and Address of Secretary.
<p>PIGS—continued.</p> <p>Middle White Yorkshire...</p>	<p>National Pig Breeders' Association. Secretary : John Parr, Nottingham Road, Borrowash, Derby.</p>
<p>Tamworth </p>	<p>British Tamworth Pig Breeders' Association. Secretary : J. G. Kerr, Estate Office, Cholderton, Salisbury.</p>
<p>GOATS.</p>	<p>British Goat Society. Hon. Secretary : H. S. Holmes Pegler, Coombe Bury House, Kingston Hill, Surrey.</p>

PRINCIPAL PLACES OF SALE AND AVERAGE PRICES OF ANIMALS OF EACH BREED.

Principal Places of Public Sale, Exhibitions and Shows.	Average Prices.
<p>Shows:—Royal Agricultural Society's, Bath and West, Royal Lancashire, Great Yorkshire, Peterborough, Royal Counties, Highland and Agricultural Society's and most of the County Shows.</p> <p>Sales are held in connection with the Royal Show and on breeder's farms.</p>	<p>At the sale held in connection with the Royal Show in 1911, 18 animals averaged £7 9s. 11d.</p>
<p>Shows:—Royal Agricultural Society's, Bath and West, Royal Counties, Royal Lancashire, Warwickshire and other County Shows.</p> <p>Sales are held in connection with the Royal Show and at breeders' farms.</p>	<p>At the sale held in connection with the Royal Show, 1911, 17 animals averaged £4 8s. 4d. At a recent dispersion sale prices ranged up to £15 15s. a head.</p>
<p>Shows:—The Society holds an Annual Show in or near London, London Dairy Show, and Tunbridge Wells.</p>	<p>Stud Goats from £8 to £10; She Goats in milk from £3 to £15; Long-haired Irish Breed from £1 to £2.</p> <p>The chief breeds for milk in England are the Anglo-Nubian and the Toggenburg, but a large proportion of the best milkers are the result of a cross between these two breeds. Toggenburg Goats are comparatively scarce in England, and the prices for milch goats of this breed vary between £5 and £20.</p>

GOVERNMENT ASSISTANCE TO LIGHT HORSE BREEDING.

In 1911 the functions of the Royal Commission on Horse-Breeding were transferred to the Board of Agriculture and Fisheries, and a grant of £40,000 was made to them for the encouragement and improvement of the Light Horse Breeding Industry. The Board publish annually a report as to the administration of the grants made to them but the following brief outline of their operations in 1911-12 may be of interest.

The Board are endeavouring to secure an improvement in the breeding of light horses by the provision of high-class Thoroughbred stallions for the service of half-bred mares at a low fee, and of some 800 selected mares free of charge. In order to encourage the keeping of brood mares of substance and quality for breeding purposes, the Board, through the agency of County Committees, are arranging for the annual purchase of some 200 mares at an approximate cost of £10,000 for leasing out to suitable custodians; and with a view of placing on the road as many stallions as possible that are free from hereditary disease and suitable for breeding purposes, the Board undertake to examine stallions free of charge and to issue certificates of soundness to all that pass inspection. In 1911, 312 Certificates were issued and in 1912, 715. (The registration of stallions is not restricted to light horses.)

Two shows of Thoroughbred stallions have been held by the Board in connection with the Hunters Improvement Society during the period under review, and 50 premiums averaging £180 were awarded at each of them.

At the show held in March, 1912, the stallions exhibited were reported by the judges to be considerably superior in merit to those paraded in 1911, and it is a significant fact that no fewer than fifteen stallions which won premiums in 1911 failed to secure awards this year. Two innovations were introduced which were well received by exhibitors—one was the veterinary examination, prior to entry, of stallions intended for exhibition, and the other was the award of an additional subsidy of 100 guineas to each of the best ten stallions to which premiums were awarded, and the winners of these super-premiums were reported by the judges to be horses of an exceptionally high standard.

The results of the service season of 1911 were satisfactory, the average number of mares served by each stallion being 65.

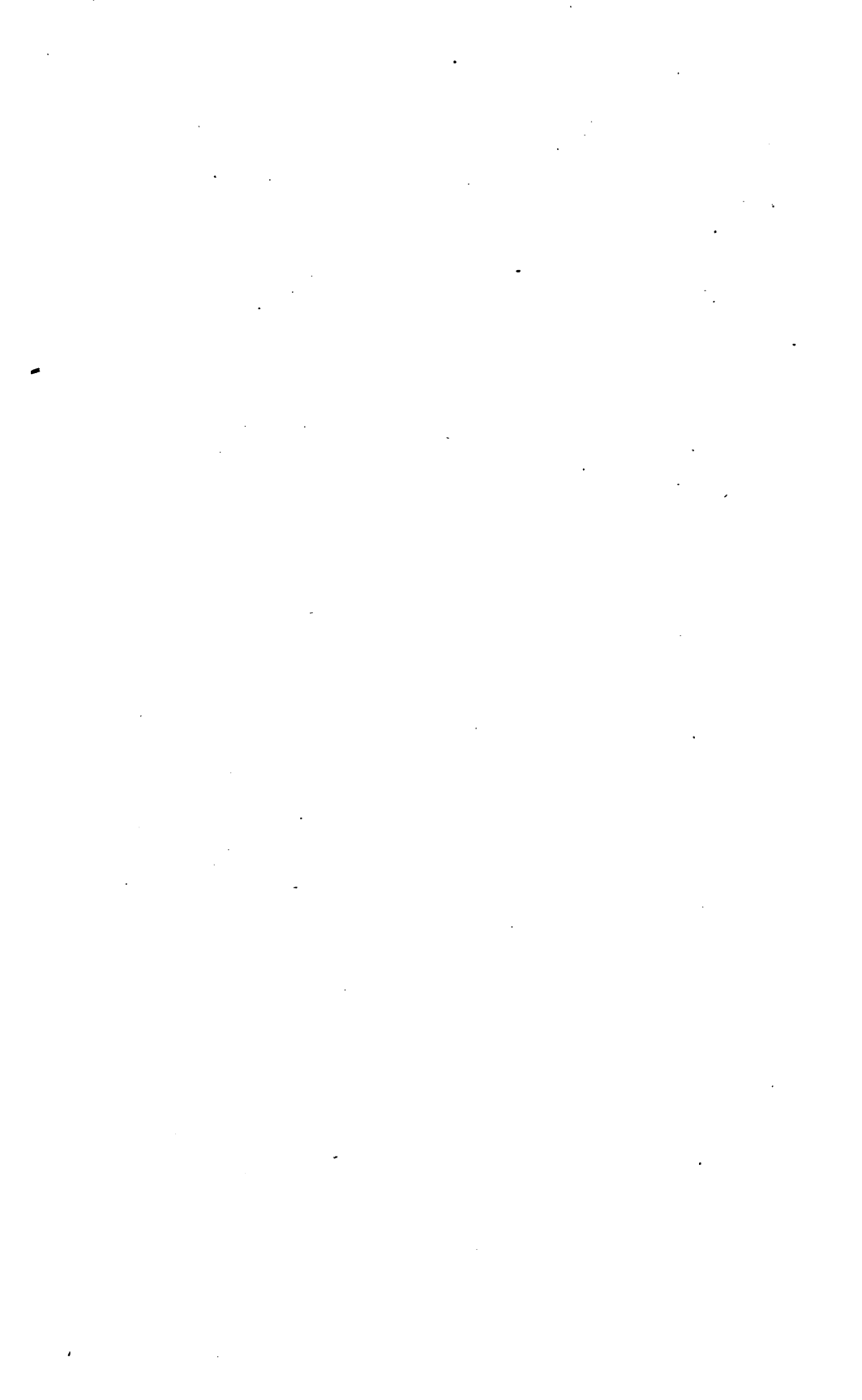
Steps are also being taken to revive the breeding of some of the hardy native types of horses and ponies in Wales and Scotland. In Pembrokeshire and Carmarthenshire, where the useful old Welsh light cart horse, known as the pack horse or roadster, has, by cross-breeding and from other causes been steadily deteriorating and disappearing, assistance to the extent of £400 has been given to each County Committee to purchase suitable mares of the old type and provision made for the hiring of stallions for mating with them.

A grant of £400 has also been made to the County Committee for Inverness for the purchase of typical Highland pony mares to be mated with selected stallions of the breed.

Steps are also being taken to encourage the breeding of the old type of Welsh Cob, and funds have been provided for subsidising pony stallions of the Mountain and Moorland breeds (*i.e.*, Fell, Welsh, New Forest, &c., &c.).







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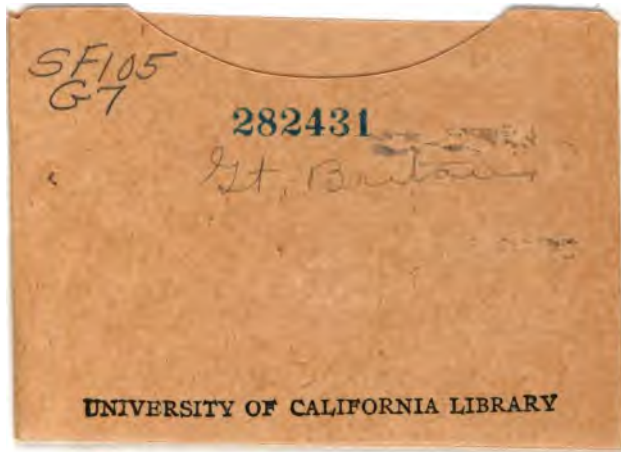
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